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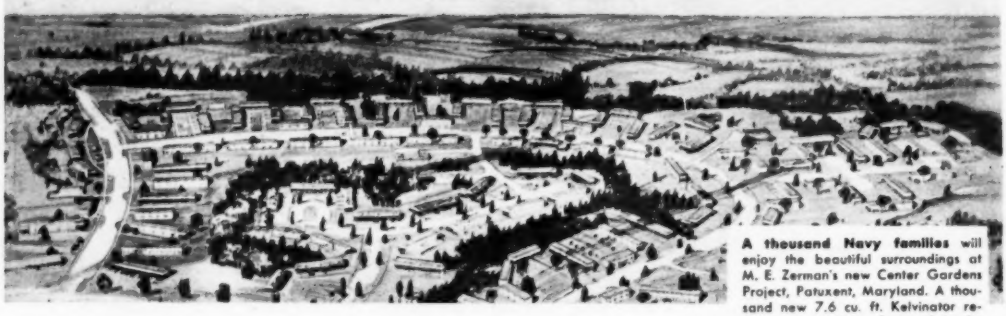
Architect, Victor E. DeMers



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Volume 74 **FEBRUARY, 1952** Number 2

AMERICAN BUILDER

American Builder is published by the SIMMONS-BOARDMAN PUBLISHING CORPORATION, Emmett St., Bristol, Conn., with editorial and executive offices at 79 W. Monroe St., Chicago 3, Ill.; 30 Church St., New York 7, N.Y. James G. Lyne, President; Samuel O. Dunn, Chairman Emeritus; Robert H. Morris, Publisher and Vice President; C. J. Wageman, Assistant Publisher and Vice President; J. S. Crane, Vice President and Secretary; F. A. Clark, Charles A. Simonson, Vice Presidents; A. J. McGinnis, Treasurer.

Office of publication, Bristol, Conn. Editorial and executive offices at 79 W. Monroe St., Chicago 3, Ill., and 30 Church St., New York 7, N.Y. American Builder (originally "Carpentry and Building") with which are incorporated Building Age, National Builder, Permanent Builder, and the Builder's Journal, was founded Jan. 1, 1879. Names registered in U.S. patent office and Canadian registrar of trade mark.

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Subscription price: United States and Possessions and Canada, 1 year, $3; 3 years, $5; foreign countries, 1 year, $10; 3 years, $20. Single copies, 50c each. Subscribers are requested to state company connection, nature of business, title or position. W. L. TAYLOR, Circulation Manager; Field Staff: C. L. Conley, W. J. Griffith, M. A. Spector, John Simonson, Dick Whittington.

Address: all subscriptions and correspondence concerning them to: Subscription Department, American Builder, Emmett St., Bristol, Conn. Changes of address should reach us three weeks in advance of next issue date. Send old address with the new, enclosing if possible your address label. The Post Office will not forward copies unless you provide extra postage. Duplicate copies cannot be sent.

Advertising Sales Offices: 79 W. Monroe St., Chicago, Ill.; Terminal Tower, Cleveland, Ohio; 2909 Maple Avenue, Dallas, Texas; 30 Church Street, New York 7, N. Y.; 514 Terminal Sales Bldg., Portland, Ore.; 1127 Wilshire Blvd., Los Angeles, Calif.

American Builder is a member of Associated Business Publications (A.B.P.) and Audit Bureau of Circulations (A.B.C.). Printed in U.S.A.

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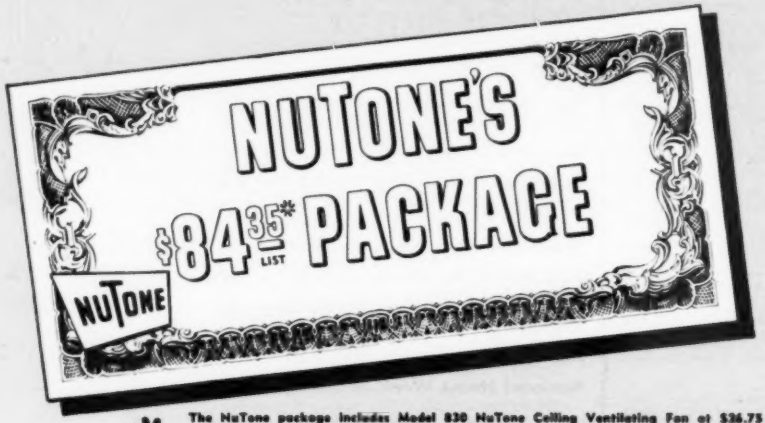

* The NuTone package includes Model 830 NuTone Ceiling Ventilating Fan at $36.75 list; a NuTone Model K-16 Door Chime at $7.65 list; and a NuTone Heat-A-Lite Model 900 at $49.95 list — all INDIVIDUALLY PACKAGED. (If you prefer a wall model you may substitute NuTone Model 800 Wall Ventilating Fan at $27.75 list).

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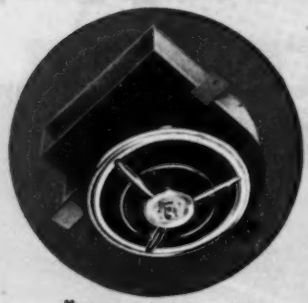

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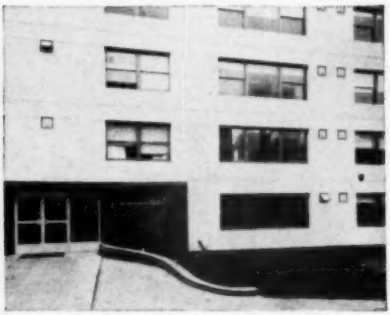

Illustrated at the right is the $1,500,000 Queensborough Apartments of Seattle, Washington . . . equipped with NuTone. (Notice the NuTone Ventilating Fan hoods for each apartment.)

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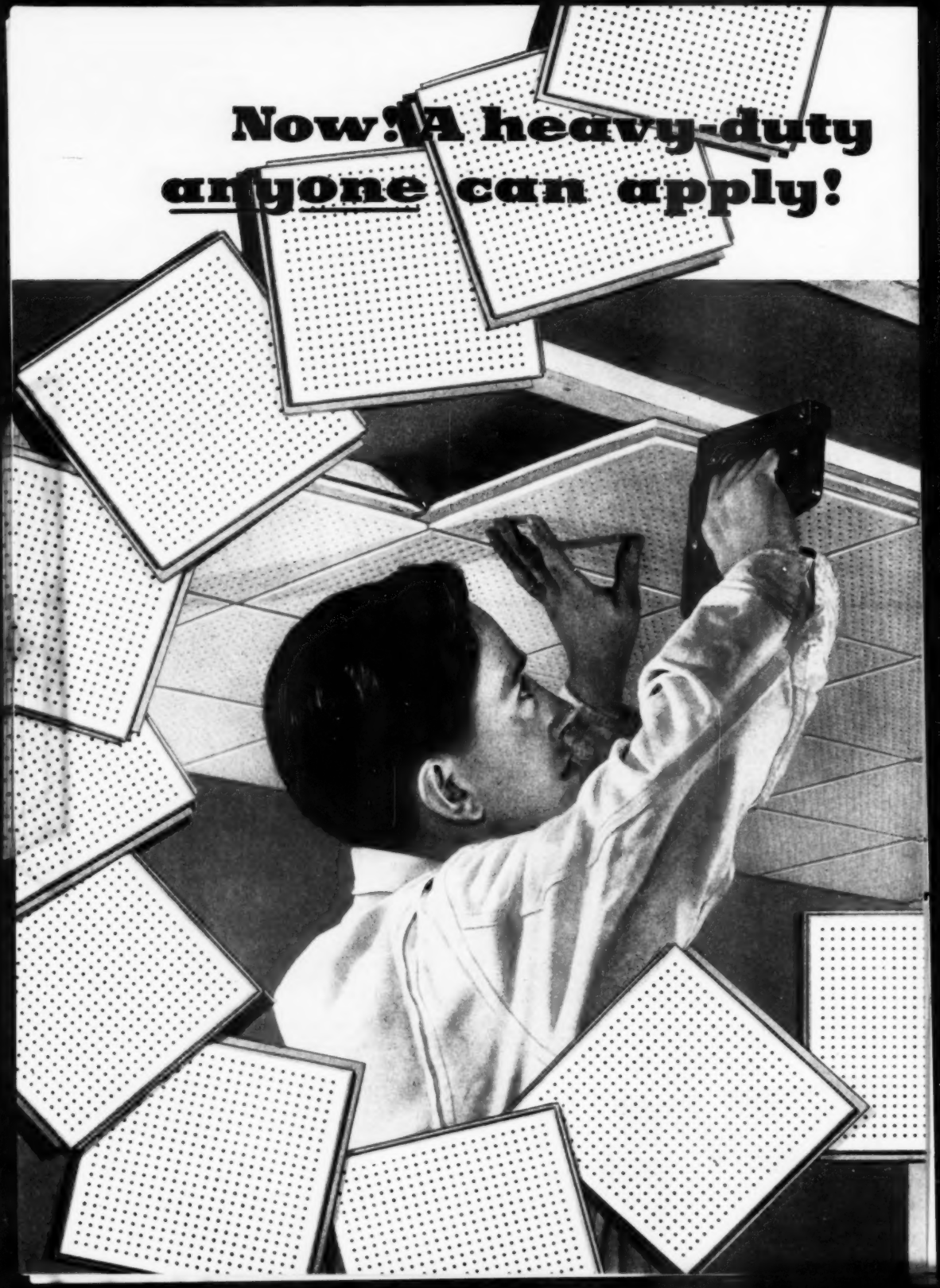
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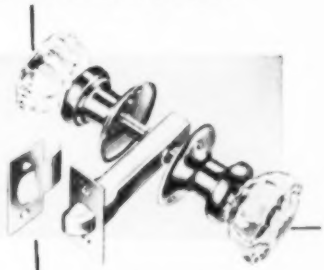

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Producing for Defense

THERE are two ways to create the physical tools for adequate national defense. The first is to accept the fact that armament for national defense plus adequate goods for all normal civilian use cannot be produced at the same time with labor and white collar workers restricting themselves to eight-hour days, five-day weeks, and, in some cases, individual production restrictions by union rules on the one hand and indifference on the other. So, as a people, we decide to work neither longer nor harder. No more production per individual is forthcoming than if there were no need of production for national defense. As a substitute for increased individual production, we accept government control of the division of production between civilian needs and the national defense requirements.

There are two immediate results. One is that the defense program develops slower than it should. The other is that there are not enough goods for civilian demand. That automatically calls for restriction of goods for civilian use which in turn automatically calls for price controls and wage controls to prevent runaway inflation. These controls call for Federal supervision and enforcement bureaus, which take producers from forces already too small and place them in non-producing work. Increased Federal payrolls, civilian and military, call for greater Federal expenditure, and consequently increased tax revenue.

Since the public has decided not to work harder or longer to increase its dollar earnings, and screams because its purchasing power is impaired by increased taxes, government continuously lets wages rise and is forced to let prices rise. It then starts printing worthless money which, mixed with the sound money, adulterates the total money value. And all the time there must be more and more controls, from which the people never entirely rid themselves.

So, one way to produce national defense is under the opiate of a controlled economy, projected as a temporary emergency measure. It is the easy way at the moment. No one works any harder. Everyone has more money. No one wants to consider this easy way as a sellout of the individual freedom of the next generation or as a deadly mortgage on the economic situation, or as an evasion of personal responsibility, or as a manifestation of deteriorating moral fibre. But it is all of those.

The other way—the hard, but in the end, the morally right way—is for this generation to accept its responsibility, justify its birthright to the heritage of freedom which it received intact from its morally responsible forefathers, produce to capacity, which will be enough for all requirements without controls, without inflation, and without accepting the dead hand of socialism.

But that is asking too much of pleasure-mad Americans of this day. So we will produce not all the new houses we need in 1952, or all of anything else that we need. We must be kept happy, even though doped, and to hell with the bill we are running up, or who has to pay it.

PUBLISHER, Robert H. Morris ASSISTANT PUBLISHER, C. J. Wagoman
EDITOR, Edward G. Gavin
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Every effort will be made to return material submitted for possible publication (if accompanied by stamped, addressed envelope), but the editors and the corporation will not be responsible for loss or damage.

AB Washington News Letter

For the Light Construction Industry

A special service for American Builder readers. The latest Washington developments affecting the light construction industry assembled by special Washington correspondent and sent by wire to be printed and bound in your American Builder at the last minute before it is mailed. A regular monthly feature.

Washington, January 21, 1952.

▶ AVAILABILITY OF MATERIALS looks like the key to 1952 housing. Beginning with the second quarter, materials allotted will be reduced to about 60 per cent of the 1951 level. Starts will certainly be curtailed, but the extent is unpredictable. NPA wants "ingenious builders" to make materials go further -- conserve, substitute, build smaller homes, and use up inventories.

▶ DPA CHIEF MANLY FLEISCHMANN was first to break the bad news. Before a joint Congressional committee on January 9, he said: "It will be necessary also to reduce the level of residential housing...(It) will be subject to the same pruning knife being applied elsewhere on account of material shortages."

▶ A NEW TARGET FIGURE for 1952 starts had not been announced as this issue went to press. In announcing second-quarter allotments, NPA spoke of a 600,000 level of home construction. Later, the agency backed away. It said the figure was "in no sense a limitation of starts." What is desired is to get the maximum number of units out of the materials allotted, NPA said.

▶ HHFA IS STUDYING this new allocations situation, trying to decide what new regulations will best spread the dwindling supply of materials among builders. Changes may include a modification of self-certification, new limitations on the use of copper, and a square-foot limitation designed to hold down the size of new houses.

▶ NPA IS RE-WRITING all of its construction orders into one "simple language" package. The revision is expected to contain provisions worked out by HHFA to meet material cutbacks.

▶ WE HAVE ENTERED the period of severest "pinch" in the allocation of critical materials, according to Defense Mobilizer Charles E. Wilson. He says the outlook for the remainder of the year is not fully clear, but we can be sure the "pinch" will tighten and continue into 1953.

▶ AVAILABILITY OF COPPER for plumbing and other building products may delay completion of houses started in the first quarter of 1952. Mr. Wilson said in his latest report on mobilization that "forthright action" must be taken to prevent houses from being started which cannot be completed.

▶ NEW LEGISLATION may be asked. Mr. Wilson said it is "essential" that credit control authority be "restored" in order to bring demand for new housing in line with the number for which materials are available.

▶ PRESIDENT TRUMAN RECOMMENDED in his economic report to Congress that the Federal Reserve Board again be given administrative discretion to list credit on new housing. Congress last year reduced such credit control when it passed the Defense Housing Act.

▶ AN INADEQUATE SUPPLY of new housing is part of the price we must pay for national defense. This is the view of the President's council of economic advisors. In their annual economic review they said, "Housing in the next two years must be held down to between 1/2 to 2/3 of actual need. It is essential, they say, that a majority of available starts be in areas where housing is most needed. Concentration upon reasonably priced housing coupled with severe limitations of luxury housing should be the goal.

▶ "AN AVERAGE OF ONE AND A HALF MILLION HOUSING STARTS would be required throughout the 1950's to meet the nation's housing needs," the economic advisors said. They added that, "a large number" of these starts should be "publicly-financed low rent housing for low income families. Even in 1952, at least 75,000 such units should be built, they said. They also said, "800,000 to 850,000 new non-farm starts are needed in 1952, "merely to maintain present housing standards" but indicated this goal cannot be reached without, "substantial economies in the use of scarce materials."

▶ THE MILITARY TAKE OF COPPER, including "B" products, will amount to about 31 per cent of supply in the second quarter. This take will "rise only slightly" the third quarter, and will level off "at about that figure." As to aluminum, the military take is running slightly above 50 per cent of supply.

▶ CRITICAL AREAS continue to grow in number, and reached 140 by mid-January. Meanwhile, HHFA had programmed housing for 122 of the areas. This housing includes 47,310 rental and 20,045 sales units. Officials say applications for the "critical" designation have slowed down at the moment, but they think such designations may still reach 250 by July 1.

▶"THERE IS NO EVIDENCE in any area that builders are failing to apply for programmed housing," HHFA recently told the Senate Banking Committee. Reports from 80 areas show builders have applied to build three times as many units as have been programmed, Administrator Foley said.

▶ A NEW HOUSING INVESTIGATION is in the offing. The Senate Banking Committee has decided to look over the mortgage situation, and make on-the-spot studies of housing at several defense areas. Senator Maybank (D.-S.C.) heads the committee.

▶ KEY BUILDERS, insurance companies, and savings banks will be asked to testify. Present plans are to begin such hearings in February. This study will parallel one which the House Banking and Currency Committee is planning. The House group will investigate VA and FHA mortgage-loan policies.

▶ COMPLAINTS FROM VETERANS have reached both committees. The men say they can't obtain financing at 4 per cent. Senator Maybank already is sponsoring a bill that would put the VA back in business. It would permit VA to sell mortgages to the big National Service Life Insurance fund, now invested in government bonds.

▶ FOR SALE: MORTGAGES. The VA is offering to sell $95,000,000 in mortgages acquired through direct loans to veterans. It seems the agency used up most of its $150,000,000 revolving fund, making loans in areas "where private capital was not available for GI 4 per cent loans." Now it must sell off mortgages to private lenders to restore the fund.

▶ ANOTHER $48,000,000 of the mortgages is expected to go on the block shortly. VA regional offices are handling the sales, and the "high investment caliber" of the paper is being stressed. As a rule, direct VA home loans are made in non-metropolitan areas.

▶ DECEMBER HOUSING STARTS have been estimated at 62,000 by the Bureau of Labor Statistics. Also, the figure for last September has been revised upward by 5,400 units. This places the estimated year-end figure at 1,090,000 starts, compared with 1,396,000 in 1950.

▶ COMMUNITIES THAT NEED HELP in providing facilities and services in critical areas may apply for federal aid. Congress appropriated $15,500,000 for this purpose, and HHFA-FSA have worked out joint plans to provide such help. "Only the most urgent needs" will be approved, the agencies say.

▶ PUBLIC HOUSING ADMINISTRATION is providing 4,575 units of temporary housing at 22 military installations. Estimated cost: $19,000,000. This title III housing consists of trailers or portable family dwellings that can be moved and reused. Congress last fall appropriated $25,000,000 for this type housing; and HHFA says the remaining $6,000,000 will be utilized shortly.

TRENDS in the Building Field

Six Million New Homes in Six Years

DURING the year 1951, 1,160,000 new dwelling units were started; it was the third year in a row in which housing starts exceeded a million. Since 1946 a total of six million new homes have been started. About one out of seven American families now lives in a new home.

There are indications that the public hunger for new homes is still unsatisfied. Figures from the 1950 census just released show a very low vacancy ratio in most areas. In North Carolina, for example, only 1.4 per cent of units were vacant and for rent or for sale. In Utah 2.2 per cent were vacant, in South Dakota, 1 per cent, in Oregon, 2.7 per cent and in Oklahoma, 2.2 per cent.

It is apparent that a further housing shortage will develop if government actually cuts 1952 construction of new homes to a figure as low as 600,000.

DOLLAR VOLUME of building was down only slightly in December as compared with a year ago. There was, however, a 22 per cent drop in dollar volume of residential building and a 51 per cent decrease in commercial building.

Residential alterations, industrial building, farm building, and public construction all showed increases in dollar volume over the previous December. The increase in residential alteration volume was 29 per cent, industrial building, 18 per cent, farm building, 14 per cent, and public construction 36 per cent.

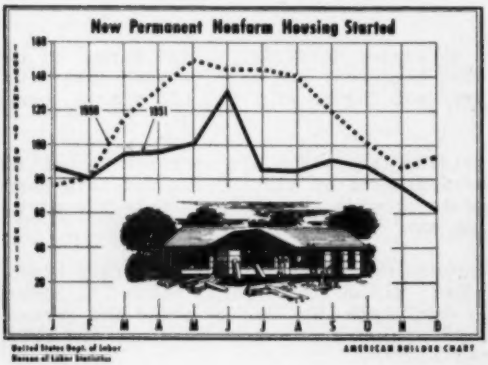
The decrease in residential building caused by the increase in FHA mortgage terms and the decrease in commercial building, which is subject to NPA authorization, have thus been offset to a large extent by increases in residential alterations, industrial and farm building and public construction.

PRICE CHANGES as compared with a year ago are negligible for common brick, dimension lumber, bathtubs, asphalt shingles and insulation board. Paint, window glass and nails are up 9 per cent, 7 per cent, and 8 per cent, respectively over a year ago. Flooring and doors have dropped 13 per cent and 14 per cent, respectively.

Plywood mills, which had a severe decrease in orders in the last quarter of 1951, are now reporting substantial increases. They attribute the rush of orders to the feeling in the construction industry that prices have hit bottom.

The building material wholesale price index at the end of 1951 was 224.6 (1926-100), indicating that prices have more than doubled since 1926. By comparison, the wholesale price index of all commodities was 178.3. One reason that the building material price index is so high is the cost of lumber. Despite recent decreases in the price of lumber, the index as of the end of 1951 was 345.4. Since lumber accounts for about half the cost of materials in the average house, it will require a much greater decrease in lumber costs before prices of new houses can be trimmed.

REAL ESTATE ACTIVITY, although still in a downward trend, continues to be at boom level according to Roy Wenzlick & Co. When Regulation X was promulgated in October 1950, dire predictions of chaos and collapse were made. However most sections of the country are continuing to enjoy a level of real estate activity considerably above average. Activity in some major cities is now well above the level it occupied a year ago. Foremost among these cities are Des Moines, Iowa, and Kansas City, Missouri, where activity was 19 per cent and 27 per cent, respectively above the October 1950 level.



United States Dept. of Labor
Bureau of Labor Statistics

AMERICAN BUILDER CHART

THE SCORE BOARD

Per Cent Change Compared With Last Year

	Up %	Down %
Dwelling Units Started		
Month of December		34
12 Months		22
Dollar Volume of Construction (December)		
Private Dwelling Units		22
Private Residential Alterations	29	
Private Industrial	18	
Private Commercial		51
Private Farm	14	
Public Construction	36	
Total Construction		2
Price Changes (December)		
Common Brick		1
Cement	2	
Dimension Lumber		2
Flooring		13
Doors		14
Paint (Outside)	9	
Bathtubs	10	
Furnaces	N. C.	
Asphalt Shingles		2
Window Glass	7	
Nails	8	
Insulation Board		1
Average Hourly Earnings		
Construction Cost Index	4	
N.C. = No Change		

"You Can Bank on this Mortar!"

So said the Masons on the First Federal Savings & Loan Building, at Lubbock, Texas

● A trim, pleasing, well-built bank structure augments confidence, suggests progressive, friendly, up-to-date service. Expressive both of good banking and good construction is the First Federal Savings & Loan Building, Lubbock, Texas.

Character of the construction is typified by the use of LONE STAR MASONRY CEMENT for all brick and cast-stone work.

The Masons whose workmanship stands out all over this structure had friendly words for the workmanlike performance of this Masonry Mortar—

for the rich, buttery, even texture that makes it easy to spread evenly under the trowel, in longer mortar beds;

of how this mortar sticks to brick, with minimum loss due to droppage;

of how well this mortar remains plastic, retaining water and keeping thirsty brick or block from sucking water from the mortar;

of the clean, smooth, moisture-proof joints—hallmarks of the good Mason and good masonry cement.

"That's mortar you can bank on," is the way the Masons summed it up. Use LONE STAR MASONRY CEMENT on your next job—see if you don't agree.

LONE STAR CEMENTS COVER THE ENTIRE CONSTRUCTION FIELD

FIRST FEDERAL SAVINGS & LOAN BUILDING
Contractor: TELFORD CONSTRUCTION COMPANY
Architects: ATCHESON & ATKINSON
Lone Star Masonry Cement from:
LUBBOCK BUILDING PRODUCTS CO.
all of Lubbock, Texas

LONE STAR CEMENT CORPORATION

Offices: ABILENE, TEX. • ALBANY, N.Y. • BETHLEHEM, PA. • BIRMINGHAM • BOSTON • CHICAGO • DALLAS • HOUSTON • INDIANAPOLIS KANSAS CITY, MO. • NEW ORLEANS • NEW YORK • NORFOLK • PHILADELPHIA • RICHMOND • ST. LOUIS • WASHINGTON, D.C.

LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST CEMENT PRODUCERS: 17 MODERN MILLS, 125,000,000 SACKS ANNUAL CAPACITY

Why BH&G is BIG in a better way

No other man-woman magazine offers 3½-million NATURAL building materials prospects—screened for the BUY on their minds!

"Better Homes & Gardens is our greatest selling aid among all major magazines!" So say lumber and building materials dealers—by a vote of almost 7 to 1.

BH&G is their natural choice because it's the *biggest* magazine of especial interest to families building, maintaining and improving their homes.

These 3½-million families repair and remodel at the rate of over 1¾-million jobs a year—most of them have bigger-than-average homes—and BH&G's millions include 7 out of 10 of all America's families that are building *new homes!*

What's more, these multimillion natural prospects think of BH&G as their family counselor on all home-building and home improvement problems—

What they see in BH&G commands their attention and respect—whether it's a plan, a suggestion—or an advertisement of your wares!

Better Homes and Gardens

Serving a SCREENED MARKET

of 3½-Million Better Families

MEREDITH PUBLISHING COMPANY, Des Moines, Iowa

you are looking at

Sea Swirl

T. M. REG.

new wonder wood of Associated Plywood Mills, Inc.

Sea Swirl is a decorative plywood, made from superior grades of Douglas fir plywood. Interior and exterior types are available in 4'x8' size, 5/16" thickness. (Other sizes on special order.)

Uses are unlimited in remodeling or new residential and commercial construction: for walls, ceilings, built-ins, furniture.

Sea Swirl is available at APMI Sales Warehouses, as is regular Douglas fir plywood, exterior and interior grades. Contact the warehouse nearest you or write for illustrated booklet.

Associated Plywood Mills, Inc.

APMI

PLYWOOD MILLS:
Eugene and Williamina, Oregon

APMI SALES WAREHOUSES

925 Toland St., San Francisco, California; 4814 Bengal St., Dallas, Texas; 4003 Coyle St., Houston, Texas; 4268 Utah St., St. Louis, Missouri; 1026 Jay St., Charlotte, North Carolina; 111 W. Welborn St., Greenville, South Carolina; Eugene, Oregon.

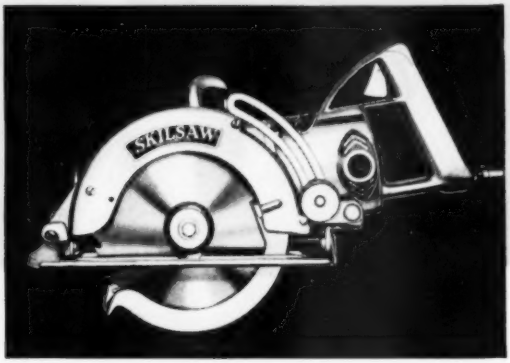
"SKIL Saws, with the blade in full view, are made for accuracy!"

says **H. E. WALLACE,** carpenter foreman,
DRYDEN CORPORATION, Houston, Texas.

"Take *this* cut, for instance," says Mr. Wallace, "with the saw tilted to 45°, you can still see the SKIL Saw blade. You *must* see the guide notch and the saw blade to do accurate work. I've been using SKIL Saws for 11 years," he adds, "and I'll *always* use them because of their accuracy and speed. SKIL Saws have played a big part in our construction of 160 houses in this subdivision in less than a year. We give complete approval to these tools."

SEE YOUR DISTRIBUTOR FOR COMPLETE INFORMATION OR CALL YOUR NEAREST SKILSAW FACTORY BRANCH

SKIL
PORTABLE TOOLS

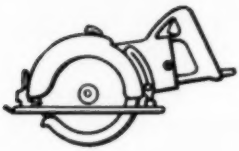


SKIL Products are made only by SKILSAW, Inc.
5033 Elston Avenue, Chicago 30, Illinois

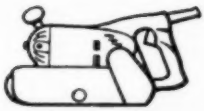
• • •

Skilsaw Factory Branches in 34 Principal Cities.
In Canada: Skiltools, Ltd.,
3601 Dundas Street West, Toronto 9, Ont.

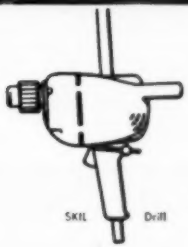
SKIL Saw Model 77— One of 10 SKIL models. 7¼" saw with full base adjustments for 0" to 2⅜" vertical depth of cut; 0° to 45° bevel adjustment; 1¾" depth of cut at 45°. Speed: 3200 r.p.m. no-load. Overall length: 17¼". Weight: 15¾ pounds.



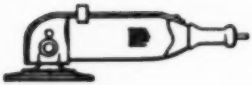
SKIL Saw



SKIL Belt Sander



SKIL Drill

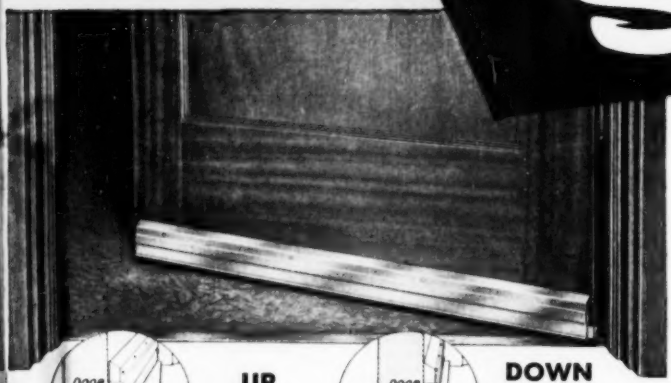


SKIL Disc Sander

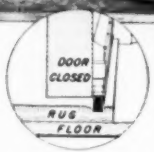
Mack says...

Be prepared for

Stock



UP
automatically when door opens
Felt bottom raises to clear carpets and rugs.



DOWN
snugly when door closes
Thick felt bottom now hugs floor to seal out drafts, noises, odors.

Nu-GARD *Automatic*
DOOR BOTTOM AND DRAFT ELIMINATOR

Here's the perfect answer for all drafty doors — inside or outside! This completely automatic door bottom solves the old problem of clearing rug or carpet every time door opens. It's beautifully designed with smart, silvery-satin finish and easily installed. All working parts made of high quality Alacrome metal — will not rust or tarnish. Furnished in 28", 32", 36", 42" and 48" lengths. May be shortened approx. 2". Packed in individual cartons.

Nu-Phalt
PLASTIC ASPHALT CEMENT

A new M-D top-quality product for home-owners and builders alike! Used for sticking down asphalt shingles, around chimney and valley flashings, setting loose floor tile and dozens of other ways. Comes in popular load form like M-D's famous *SPEED LOAD* for calking guns, or in 2½ lb., 10 lb., 50 lb. and 550 lb. containers. Try it yourself and see what wonderful sales possibilities Nu-Phalt has!

A NEW M-D
PROFIT-MAKER!

Nu-Glaze GLAZING COMPOUND
Always Stays "Put"

When it comes to glazing you just can't beat Nu-Glaze! It's so easy to use! And it does not dry out, harden, crack or peel! Sell Nu-Glaze instead of putty for all glazing, filling cracks, setting plumbing, etc. Comes in ½ pint, pint, quart. 5 lb. cans. Also available in drums — 25 lbs., 50 lbs., 100 lbs., 880 lbs.

ORDER NOW — *Your order will be shipped same day received!*

COLD WEATHER SALES

Up ON THESE WEATHERPROOF ITEMS!

Nu-WAY WEATHER STRIP

Easiest in the world to put on!

Any clerk, regardless of experience, can sell Nu-WAY Weather Strip! That's because any customer can put it on quickly and easily. What faster way can sales be made than that?

Nu-WAY works perfectly on most any type window, storm-sash or door. Made of moth-proof, pre-shrunk, color-fast wool felt and white metal.

Yes, Nu-WAY keeps out cold — saves fuel and at such a reasonable price really brings in sales!

This colorful, attractive display carton really sells the goods! Contains one individual 20 ft. roll of Nu-WAY, with sufficient nails and instructions for easy installing. Stock up today!

Nu-CALK SPEED LOAD

for calking cracks around windows and door frames!

Nu-Calk is America's all-time favorite calking compound. That's because SPEED LOAD is the most efficient, most practical calking load on the market!

Fits our Speed Loader gun or standard CG-3 calking gun. And is so easy to use, it's preferred by the experienced as well as the beginner!

Sell the fact that no house or building is weather-tight until it is calked, and you'll have Nu-Calk sales galore!

Packaged 10 loads to each carton and 4 cartons per shipping case. Freight allowed on 8 cartons or more. Also available in cans from 1/4 pint to 55 gallon drums!

MACKLANBURG DUNCAN CO.
MANUFACTURERS OF
QUALITY
BUILDING SPECIALTIES

MACKLANBURG DUNCAN CO.

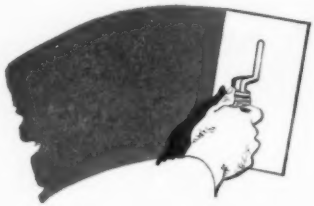
OKLAHOMA CITY 1, OKLA.

Build in quality 2 easy ways

FOR A *double feature* THAT SELLS

PLASTER with PERMALITE

Base coat plaster with lightweight Permalite aggregate adds built-in insulation . . . fireproofing . . . crack resistance . . . and saves up to 4 tons dead-weight in an average 5 room house. Its use means less settling and minimum maintenance, plus important fuel savings and added Winter and Summer comfort. It's the finest wall finish you can use. These important factors make a big impression on home buyers . . . make them want to buy!



CONCRETE with PERMALITE

Concrete with Permalite aggregate gives up to 20 times more heat insulation than ordinary concrete. Use it for floor fill insulation. It screeds smooth in one operation, forms a hard surface free from flaking and provides adequate structural strength. It's a superior base for floor radiant heating system. Permalite adds *much* to building quality... *little* to building cost.

2

Permalite lightweight aggregates, rigidly controlled for *uniform* quality, are packed in 4 cu. ft. bags. They're convenient to store indoors, easy to handle, to mix. Meet all building code requirements. Get the full story on Permalite aggregates and how they're being used with outstanding success in houses of all sizes. Send in the coupon today.

Permalite

THE LEADING PERLITE AGGREGATE

A Building Product of Great Lakes Carbon Corporation and its exclusive Permalite Licensees

SEE OUR CATALOG IN SWEET'S FILE

Great Lakes Carbon Corporation, Dept. 202
18 East 48th Street, New York 17, N. Y.

Without obligation ☐ please send complete information on Permalite. ☐ Have representative call.

NAME_____

COMPANY_____

ADDRESS_____

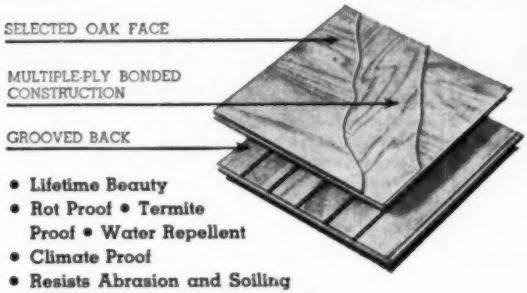
CITY_____ STATE_____

HARDWOOD FLOORING

from Higgins

WORLD-FAMOUS BOAT BUILDERS

There's a lot behind the rich beauty of Higgins Bonded Hardwood Block Flooring that doesn't meet the eye — features that give you a decided advantage on any quality hardwood flooring job.



- Lifetime Beauty
- Rot Proof • Termite Proof • Water Repellent
- Climate Proof
- Resists Abrasion and Soiling
- Ideal for Radiant Heat Installations

1. You buy Higgins Hardwood Blocks by NET measurement—each one precision cut to 9" x 9" face. No dimensional loss allowance to make for tongues and grooves.

2. You install Higgins Blocks quickly and easily over steel, concrete, or any type subflooring. Can be laid in adhesive—or blind nailed.

3. No "lefts" or "rights" to slow you down; pick any Higgins block at random, and it fits. No waste by splitting when blind nailed; tongues are integral part of block, cross-grain-reinforced.

4. Blocks come with final luxury finish—no on-the-job finishing. Housewives like the easy, low-cost maintenance of a Higgins floor. These are just a few of the many profit features.

MAIL THIS COUPON FOR SAMPLE BLOCK AND LITERATURE

Higgins, Incorporated
Dept. A-3
New Orleans, Louisiana

Gentlemen: Please send sample of Higgins Bonded Hardwood Flooring block, together with detailed literature.

Firm Name _____

Address _____

City _____ Zone _____ State _____

Your Name _____

Higgins
INCORPORATED NEW ORLEANS

BONDED HARDWOOD BLOCK FLOORING

"Thanks for helping us sell

Meet Mr. L. D. Paschal **and Mr. J. W. D. Paschal** **of Louisville, Ky.**

They erected a model home with a G-E Kitchen-Laundry and immediately sold 40 houses.

Here they are calling back on one of the buyers of their Yorkshire Homes after she had lived in it for six months:

"My wonderful G-E Dishwasher and Disposall® saves me at least two hours a day, Mr. Paschal. There's no garbage for me to carry out. I just wash it away . . . and I do the day's dishes once, after the evening meal. No dishes for hubby to *dry*, either!

"Along with the many extra conveniences there's plenty of space for bottle storage in our G-E Refrigerator—which is quite important when you have a nine-month-old baby boy. We're never cramped for storage space. There's *room* for everything—even on week ends!

Building low-cost homes? Here's a tip for you.

EVEN UNDER TODAY'S rigid credit restrictions, and higher down-payments, a low-income family can afford a General Electric Kitchen-Laundry.

You can include the cost of a General Electric Kitchen-Laundry in the long-term mortgage. It adds as little as $3.50 a month extra in monthly payments.

What one of the brothers found

"Even in times of higher down-payments I find that my houses are sold ahead of my building.

our houses!"

"We're calling to hear what you think of the G-E Kitchen-Laundry, Mrs. Engle," says one of the Paschal brothers. "We want to know whether you are still as enthusiastic about G-E equipment as you were the day you signed up for the house."

"So glad you dropped by. I'll be glad to give you my reactions," says Mrs. Engle.

"I used to cook with gas, Mr. Paschal, so I feel I can't praise my General Electric Range enough. It's so very much cleaner, and there's no odor from the units. Not only does it cook fast, but the oven is cool even in the middle of summer.

"I wash just about every day of the week, but it takes no time to speak of because I just put the clothes in my G-E Washer and G-E Dryer and they come out so fluffy and smell oh-so-good. Mr. Paschal, I want you to know that I'm *sincerely* pleased with my G-E equipped home!"

"There is no question in my mind but that the G-E Kitchen-Laundry is one of the *best* selling features a builder can put in his houses.

"These are two reasons why I chose General Electric. The first being their leading national acceptance and the second because they could furnish all the appliances to make up a kitchen and laundry under one brand name. Thanks for helping us sell our houses!"

Wouldn't it be a good idea for *you* to get in touch with your G-E distributor, or to write to G. E. *now?* General Electric, Co., Louisville 2, Ky.

GENERAL ELECTRIC

Here's the greatest little crawler tractor you've ever seen . . . the new Oliver Industrial "OC-3" It's ideally balanced for most effective loading and dozing . . . engine is mounted *back* so that front of tracks and radiator are practically in line. This better balance gives you 40% more lift with a front end loader . . . does a superior job of dozing and grading because blade is mounted close to the tracks for easier handling . . . precise control! And, operators find this balanced tractor far easier to handle . . . far less fatiguing.

The new Oliver Industrial "OC-3" gives you a full 22 drawbar horsepower . . . plenty of power for jobs in its size. It's ruggedly built for the tough jobs . . . keeps maintenance costs down. Complete accessibility makes servicing easy.

For the complete story on the new Oliver Industrial "OC-3" and how it can help your operations, see your Oliver Industrial Distributor.

THE OLIVER CORPORATION

Industrial Division: 19300 Euclid Avenue, Cleveland 17, Ohio

A complete line of industrial wheel and crawler tractors

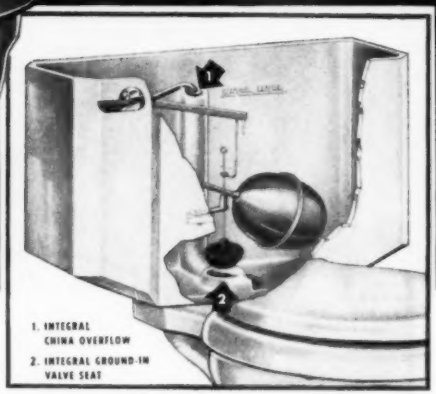
And—a Complete Line of *Spintex* Batts and Blankets

Spintex insulation is available in Ful-Thik Batts designed to provide maximum comfort and winter fuel savings. In addition there are Spintex Semi-Thik Batts and fully wrapped Blankets in three thicknesses—Thick, Medium and Service. All are made of long fiber Rock Wool by an exclusive Johns-Manville manufacturing process. Originally developed to meet the exacting requirements of insulation for ships, refrigerator and passenger cars on railroads, household refrigerators and home freezer units, Spintex is now available nationally for the insulation of houses and other types of buildings.

For full information about Spintex Insulation, write Johns-Manville, Box 290, New York 16, New York. In Canada, write 199 Bay Street, Toronto 1, Ontario.

Johns-Manville

JOHNS-MANVILLE JM PRODUCTS



BEAUTIFUL OUTSIDE
Plus
TROUBLE-FREE INSIDE = *Better Value*

Style and efficiency are combined in this Sylenta Closet Combination by Eljer.

Beautifully designed to harmonize with all types of bathroom fixtures, it is available in white or four pastel colors.

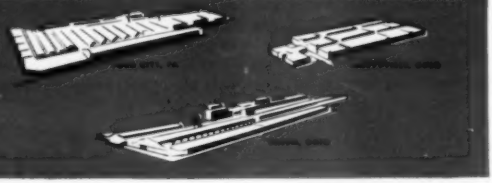
But it offers your customers much more than beauty. Most outstanding of its features are its integral china overflow and ground-in valve seat that are actually part of the tank itself. Made of real Vitreous China they eliminate thin metal tubes that wear and corrode . . . a definite "plus" to you in the form of customer satisfaction.

In addition, the quietness of Eljer's exclusive "Elvortex" Whirlpool Jet Action is a feature that customers like and demand.

You can make more money by selling the Sylenta . . . and you can sell it easily by pointing out these exclusive advantages to your customers. For complete information on this Eljer Fixture . . . as well as the rest of Eljer's complete line of china, enameled cast iron and brass . . . see your Eljer Distributor or write Eljer Co., Ford City, Pa.

It pays you, it pays us—because we specialize in Plumbing Fixtures and Brass

ELJER



ASSOCIATIONS

Their Plans and Activities

NRLDA Launches Nation-Wide Public Relations Contest

A public relations contest in which all its members are eligible to submit entries has been announced by the National Retail Lumber Dealers Association.

An outstanding feature of the competition is that each entry will consist of a single example of public relations activity, thus making it possible for any dealer, no matter how small his business may be, to compete for the awards, the association pointed out.

For example, a series of five newspaper advertisements, for purposes of the contest, would be five entries, each one eligible for an award. The series of five would, in addition, be eligible for a group award. A group is defined in the contest as two or more (but not more than five) single entries.

Awards will be made for the three best single entries from each state, for the three best single entries from each of the regional associations, and for one best group entry from each of the federated associations.

Each entry must deal with an action taken after January 1, 1951. All entries must be received by April 1, 1952. Awards will be announced at the May meeting of the NRLDA board of directors in Washington.

To be eligible for awards, the association specified, entries must consist of "visual evidence of things said or done or published or printed which meet one or both of the following tests: (1) they must be evidence of action in the public interest; or (2) they must reflect credit on the services performed by the retail lumber industry, the building industry, or the individual company concerned."

Examples given by NRLDA of public relations activities which might be judged outstanding included: advertisements, press releases, speeches, etc., telling the public about valuable services performed by the industry; unusual aid extended to a local civic or youth organization; things published or printed, etc., which promote community betterment.

Purposes of the competition are to acknowledge and commend good public relations efforts, to illustrate how dealers can improve their public relations, and to encourage more dealers to engage in constructive public relations work.

Brochures describing the contest, and entry blanks are being distributed to members through managing officers of the federated associations. Contest entries should be addressed to Public Relations Contest, National Retail Lumber Dealers Association, 302 Ring Building, Washington, D.C.

Association's Program Wins National Award

A certificate of award "in recognition of outstanding achievement in public relations" was won by the National Retail Lumber Dealers Association in the 1951 Annual Awards Competition conducted by the American Public Relations Association.

Three other national trade associations also gained recognition. All have considerably larger budgets for public relations than the lumber dealers, NRLDA officials said.

The NRLDA entry dealt with only part of its public relations program, the part designed to help individual dealers carry on effective public relations work in their own communities.

Oppose Public Housing, Builders Told

PUBLIC HOUSING was the subject of a talk by W. P. "Bill" Atkinson (second from right), 1951 National Association of Home Builders president, at recent meeting of the Master Home Builders Association of Worcester, Mass. Worcester leaders in picture are (from left) Clark Sundin, NAHB regional vice president; Milton Thompson, Worcester president; John A. Olson, NAHB director, who was toastmaster; and Robert H. Wood, executive secretary. Urging private builders to work closely with allied interests to oppose further public housing, Atkinson said that once the government gets into the housing business, it is difficult to get it out. About 375 persons attended the meeting. The association nearly doubled its membership in 1951, ending the year with a list of around 160.

HOME BUILDERS' CONVENTION

A complete report on the big January 20-24 convention of the National Association of Home Builders will be published in the March American Builder. The show's closing after our February deadline prevented inclusion in this issue.

Kovach Heads Pennsylvania State Builder Group

Stephen E. Kovach Jr. of Pittsburgh has been elected president of the Pennsylvania State Home Builders Association. Kovach served for two years as president of the Home Builders Association of Allegheny County (Pittsburgh) and is a past regional vice president of the National Association of Home Builders. A registered engineer, he is builder and developer of Prospect Park, the largest rental housing development in Western Pennsylvania. Kovach is a veteran of both world wars, serving in World War II as post engineer at Morrison Field, Fla.

Stephen E. Kovach Jr.

Dealer's Viewpoint

H. R. NORTHUP, Executive Vice President, National Retail Lumber Dealers Association

How Industry Refutes "Model T" Charges

Those desperate critics of the private building industry who keep complaining that this industry is grossly backward and inefficient will derive small comfort from the impressive amount of educational and research work now going on in just one segment of the building industry—that composed of the retailers of lumber and building materials.

In addition to continuing into the sixth year the highly successful program of 30-Day Courses for dealer employees, conducted on college and university campuses, the retail branch of the industry has embarked on a series of management conferences for owners and managers of building materials yards; and the first steps have been taken to produce, over a period of time, an operating guide for dealers and their employees.

In addition, the Lumber Dealers Research Council, which is supported by retail dealers, has financed three research projects designed to bring about better space planning in new homes and to point the way to greater efficiency in the management of retail establishments.

Several types of management conferences have been held and the results are being carefully studied with a view toward devising a pattern which will best meet the need. It is most encouraging to find that hundreds of dealers with many years of practical and successful experience are eager to keep abreast of new developments which will enable them to serve the public more efficiently.

Considerable interest also has developed among dealers in the preparation of a home study course for dealer employees who want to continue the studies started in the 30-Day Courses and for others who are unable to attend those courses. Considering the fact that as many as half of the more than 200,000 employees in retail yards may have entered the industry since the end of World War II, there undoubtedly is a great demand for this sort of training program.

A large share of the credit for awakening dealers to the value of continued training for members of their organizations must go to the industry's trade publications which have done an outstanding job of reporting new trends and new merchandising and operating methods.

This appetite for new ideas and for more knowledge is found in other industries as well, but those who have delighted in belittling the building industry will soon have to realize that their false charges are going to fall on deaf ears in the future, as the public becomes better aware of the continuing efforts which are being made to attain greater efficiency in every part of the industry.

Counsel High School Students On Home Building Industry

The public relations committee of the Builders Association of Metropolitan Detroit counseled more than 300 students on the home building industry and its various trades at the recent Trades Day program of Detroit's Denby High School.

Purpose of the committee's participation, according to John Weinhart, chairman, was to familiarize the students with the residential construction field in case they wanted to enter it after graduation. Weinhart said this was the first time the home builders had taken part in the annual high school program, but that more attention would be given to such educational activity in the future.

Committee members taking part in the program, in addition to Weinhart, included Joseph L. Curran, Richard A. Colemena, Paul Arnold, Harvey Hohlfeldt, John H. Lundblad, and the committee's secretary, Allen R. Narmore.

Top Membership is Target Of Chicago Hoo-Hoo Club

The Chicago Hoo-Hoo Club No. 29, organized April 12, 1950, is currently conducting a drive to raise membership to a top national level. Included in the group's activities is co-sponsorship of the floor show and banquet at the big annual convention of the Illinois Retail Lumber Dealers Association, held in Chicago each year. The 1952 meeting is scheduled at the Sherman Hotel February 12-14.

R. R. Clegg is vicegerent Snark of the Chicago club and E. W. Hammerschmidt is president.

Long Island Institute Re-elects Gibson

The Long Island Home Builders Institute celebrated its tenth anniversary in December by re-electing Frederick E. Gibson, one of its founders, as president. More than 400 persons attended the annual meeting of the organization, which has expanded its membership list from 22 to nearly 1,000.

Frederick E. Gibson

Special tribute was paid to Gustave A. Mezger, first president, and Otto J. Hartwig, executive officer from the start.

Other new officers include Walter G. Stackler, Leon Edelstein and James Graham, vice presidents; Emil Keen, secretary, and Charles M. Jaeger, treasurer. Leonard L. Frank continues as board chairman.

French Architect Awarded A.I.A. 1952 Gold Medal

The Gold Medal of the American Institute of Architects, its highest professional honor, will be awarded in 1952 to a French architect, Auguste Perret, Institute president Glenn Stanton has announced. The award will be made in person during the annual A.I.A. convention in New York City, June 24-27.

Perret, outstanding for buildings he has designed in reinforced concrete, is well known to American architects and to his countrymen. He is currently at work, at the age of 77, on some of the most important French reconstruction projects.

Perret last visited the United States in 1949 when he was received with honors at leading architectural schools, and visited another A.I.A. gold medalist, Frank Lloyd Wright, at Wright's Wisconsin home. An exhibition of Perret's work was shown in New York City and Chicago in 1950.

Change Dakota Meeting Dates

The annual convention of the South Dakota Retail Lumbermen's Association will be held one week later than was previously announced, Ralph J. McNerney, secretary-treasurer, has reported. The event is now scheduled for April 15-17 at the Sioux Falls Coliseum.

St. Paul Association Acts To Oppose Building Code

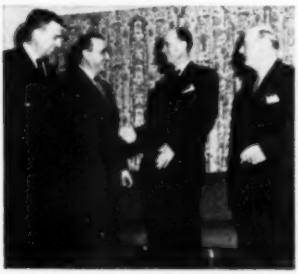
Formally expressing its opposition to a proposed city building code, the St. Paul Home Builders Association recently recommended modifications of the code in a letter addressed to the building commissioner and read at a meeting of the St. Paul city council.

The builder group's proposals, designed to permit "building the best possible quality houses for the greatest number of citizens at the least cost," included: control of the licensing of subcontractor groups in the construction industry and issuance of certificates of competency; an appeal board composed of five technical experts not in the public employ; and establishment of "performance" standards for building materials and methods instead of straight specifications.

In summing up, the letter said "we feel that the proposed building code, as it is written, is not acceptable to our association, its members, and many of the people whom we represent, primarily because it does not fulfill the purpose for which it is intended and does not, in the main, represent the best interest of the people of St. Paul."

The letter was signed by A. L. Keffer, executive director, who delivered it in person to the city council. The association indicated that it would be glad to meet with a properly constituted group, whenever requested, to make its recommendations.

Texans Hear Congressman



WASHINGTON REPORT by U. S. Representative Walter Rogers of Pampa, Texas (second from right), highlighted the dinner meeting of Texas Panhandle Home Builders Association. Greeting Rogers are (from left) Charlie Greef, president of Panhandle Plains Hoo-Hoo Club No. 8; R. G. "Dick" Hughes, secretary, National Association of Home Builders; and E. L. Campbell, president of the Panhandle builder association. More than 150 persons, including lumber dealers, attorneys and realtors, were on hand for the meeting.

California Show Set for March

The fourth annual California International Home Show and its co-feature, Builders Market Week, will be held in Oakland March 8-16.

Chart Plans for Prefab Industry

STUDYING PROGRAM at fall meeting of Prefabricated Home Manufacturers' Institute are (from left) Hart Anderson, chairman, advertising committee; John C. Taylor, Jr., president; and Harry H. Steidle, manager. Seventy-six executives from 31 companies attended the meeting at the Hotel Nicollet in Minneapolis. Featured speakers included President Taylor, Dr. Richard U. Ratcliff, professor of land economics, University of Wisconsin; and Philip A. Randall, division of housing research, Housing and Home Finance Agency

"Treasure Chests" Promote Builder Show Attendance

Use of treasure chests which can be opened only by the lucky key holders is a new attendance feature adopted by the Rochester (N. Y.) Home Builders' Association for its 1952 Spring Festival and Home Show, to be held April 19-26.

Holding valuable prizes, the chests will be located throughout the exposition. Each home show visitor will receive a key at the door and be invited to open the chests with it or any other key he may have.

Fred P. DeBlase has been elected president of the Rochester group, succeeding Mortimer Merrill. Other new officers are Arthur M. Windsor, vice president; Charles E. Erdle Jr., secretary, and Alvah B. Lawson, treasurer.

Named as directors for three years were Ward C. Benedict, Daniel W. Fraysier, Chester A. Fitch and Leland T. Pflanz.

Government Officials Speak At Mortgage Banker Meeting

More than 20 top government agency officials were on the program at the first Washington conference of the Mortgage Bankers Association of America January 14-16 at the Hotel Mayflower. The meeting was an initial experiment to find better ways for the mortgage industry to work more closely with the Federal agencies which touch its field, according to Aubrey M. Costa, Dallas, association president. The list of speakers included Manly Fleischmann, National Production Authority administrator; Raymond M. Foley, Housing and Home Finance Agency administrator; Guy E. Noyes, director of the Federal Reserve System's division of selective credit regulations; and T. B. King, chief, Loan Guaranty Section, Veterans Administration.

Cite Rapid Growth of Cedar Shake Industry

Cedar shakes comprised more than 25 per cent of the 1951 production of the cedar shingle industry, it was announced at the recent annual meeting of the Stained Shingle and Shake Association in Seattle.

Growth of the pre-stained, processed cedar shake industry has been very fast in the four years since manufacturers formed the association to advertise and promote the product nationally, it was reported. In 1948, records indicated that 1.9 per cent of new residential sidewalls were being constructed of shakes, while similar records indicate a 1951 figure of nearly eight per cent.

Tobin Speaks at St. Louis

Federal labor legislation and the need for industry organization among home builders were discussed by William J. Tobin, head of the labor and membership divisions of the National Association of Home Builders, at a recent meeting of the Home Builders Association of Greater St. Louis.

Two More Colleges Offer Dealer 30-day Courses; 14 Scheduled this Year

The scheduling of two new 30-day courses for employees of retail lumber and building material dealers brings the total for the 1951-52 school year up to 14 in 13 colleges, the Educational Department of the National Retail Lumber Dealers Association has announced. The new courses are being offered in cooperation with federated associations of NRLDA at the University of Denver and Rutgers University. They cover 144 or more instruction hours in a wide range of subjects basic to the field. The three main categories are product subjects, business subjects, and construction subjects.

Teachers for the classes are experienced businessmen from the retail field, specialists provided by building products manufacturers and college faculty members.

It is expected that several other schools will be added to the list before the second semester begins, NRLDA said. Now taking part in the program, in addition to the University of Denver and Rutgers, are: New York College of Forestry, University of Massachusetts, City College of New York, Pennsylvania State College, Michigan State College, Purdue University, Ohio State University, University of Minnesota, University of Kansas City, Southern Methodist University, and University of Washington.

Target: 100 New Members

"KICK-OFF" OF DRIVE to recruit 100 new members for Home Builders Association of Albany, N. Y., finds campaign strategists with their heads together. They are, from left: (seated) Bud Howe and Dan Santandrea, team captains; (standing) Frank Mulligan and Lansing Crannell, team captains; John Schuster, membership chairman; and Robert H. Miller, Albany Chamber of Commerce membership committee chairman.

NIREB Membership 9,365

Membership in the National Institute of Real Estate Brokers reached 9,365 with the recent enrollment of 226 new members in 35 states, Canada and the Philippine Islands, W. L. Cooper, Institute president has reported.

Head Houston Builders in 1952

1952 OFFICERS and directors of the Houston Home Builders Association (from left, standing): J. C. Watts, Dow J. Zabolio, William G. Farrington, Preston R. Plumb, James R. West (1951 president) and H. T. Fenderbosch, executive vice president. Seated: N. H. Mitchell, vice president; Marvin W. Henry, new president; and Sterling Hogan, secretary.

North Jersey Association Leaders

OFFICERS ROSTER for 1952 of the Home Builders Association of Northern New Jersey (from left): Alan D. Allen, secretary; John M. Dickerman, legislative director of the National Association of Home Builders, guest speaker; James Graham, NAHB regional vice president; Stephen Dudiak, re-elected president of the Jersey group; Russell H. Willis, treasurer; and Lewis Epstein, second vice president. Occasion was the annual officer-installation dinner.

Redwood Association Moves to New Offices

The executive offices of the California Redwood Association have been moved to larger quarters, Sherman A. Bishop, executive vice president has announced. The new address is 576 Sacramento St., San Francisco 11, where the association will occupy three floors.

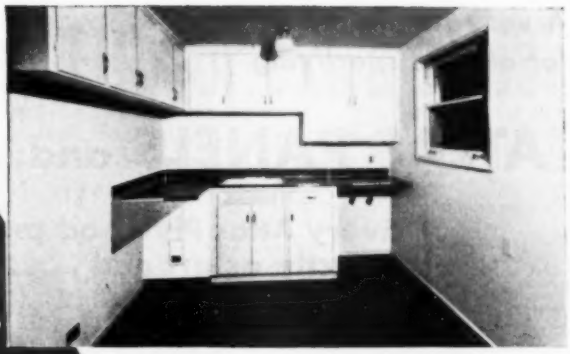
Bishop said that, besides additions made to the promotional staff, expanding activities have dictated additional personnel in both research and conservation departments.

The redwood group is now engaged in a series of intensive market surveys designed to increase the accuracy of specification of all grades of redwood lumber. Market study teams, under the direction of Philip T. Farnsworth, have already studied redwood markets in Cleveland and Buffalo, and plan to survey 12 more market areas during 1952.

Maryland Officers Installed

Principal speaker at the annual banquet and installation of officers of the Home Builders Association of Maryland, Baltimore, in January was W. P. "Bill" Atkinson, president of the National Association of Home Builders. Officers installed at the banquet, to serve during 1952, included Charles A. Mohr, president; Julius H. Requard, vice president; Henry J. Knott, treasurer; and C. Philip Pitt, secretary.

Which kitchen would your wife choose?



Montlake Terrace, Seattle, Washington. Builder: Al LaPierre

WESTINGHOUSE-EQUIPPED HOUSES ATTRACT BUYERS

Take two identical kitchens in two identical houses. Equip one with Westinghouse Appliances.

Which house would your wife choose?

You can bet your boots she'd choose the appliance-equipped one just as thousands of other women have.

We've been interviewing these owners of Westinghouse-equipped homes from coast to coast. The information they give us is important to you, for instance—

They liked having all the appliances made by Westinghouse.

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They would want these appliances included in the mortgage.

The interviews uncovered many more important facts you should know about. Fill in the coupon below and the information will be rushed to you.

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Mansfield, Ohio

Please send me a copy of your booklet "Are Appliances Important to Your Sales."

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Address _____

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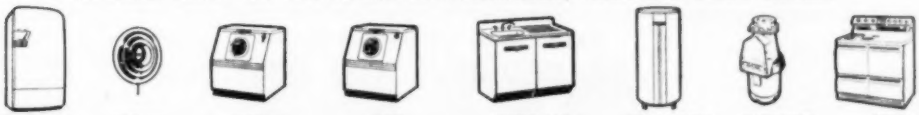
AP-2

A FULL LINE OF ELECTRIC APPLIANCES, MODELS AND SIZES



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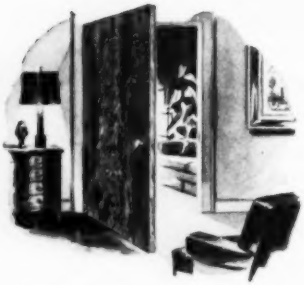

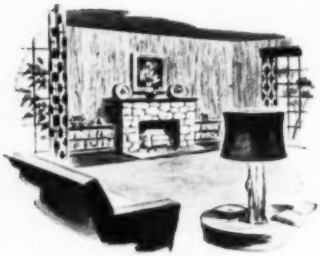

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Use HOUSE BEAUTIFUL for extra sales..

Build timely promotions around the brand names March *House Beautiful* will be pre-selling to the most progressive home-planners in your community . . . names like the typical best-sellers whose helpful trade messages appear below:

Samuel Cabot, Inc., Boston, announces a new and unique flat finish for exterior siding and woodwork. Appropriately called **RANCH HOUSE HUES**, the new finish comes in soft pastel shades based on the traditional Spanish influence on southwestern colors. Color card showing new Ranch House Hues may be had by writing.

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Beauty and utility appealing to every section of the country are featured in a full page, full color advertisement over the signature of the **CANVAS AWNING INSTITUTE** and the National Cotton Council in March House Beautiful. For detailed information on designs, patterns, fabrics, and colors, readers are referred directly to their local Retail Canvas Awning Dealers.

• • •

Compact **GAS COOKING UNITS** made by **CHAMBERS** Corp., Shelbyville, Indiana, can be built-in or combined with any cabinet arrangement. They represent a new concept in kitchen design, versatility and efficiency by the Originator and Master Builder of insulated ranges since 1910. "Chambers Cooks With The Gas Turned Off."

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MAJESTIC INDOOR INCINERATOR provides ideal solution to home refuse disposal problem. Compact unit for utility room or basement that burns garbage and trash. Attaches to regular furnace flue. Refuse serves as own fuel. Patented downdraft principle does the trick — guarantees operation. Users' satisfaction encouraging popularity everywhere. Low cost. Easy to install.

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TILE-TEX VITACHROME resilient floor tile, a new and better decorative floor tile for food serving areas . . . unaffected by spilled goods and greases. Washes up quickly with just mild soap — warm, bright colors in just the tones you want. Write the Tile-Tex Division of the Flintkote Co., 1232 McKinley St., Chicago Heights, Ill.

•

EASTERN FLIGHT WALLPAPER, the second series in the famous **STOCKWELL** series of handprints designed by Virginia Hamill, will be ready February 15. These sixteen startling patterns were inspired by the art and culture of lands bordering the Mediterranean. Sample books available at leading distributors and C. W. Stockwell Co., 3262 Wilshire Blvd., Los Angeles, Cal.

• • •

Though current national advertising features **"HARDING LEAF"** from **WARNERS** Waterhouse Collection of wallpaper with matching fabrics for draperies, slip covers, cushions, bedspreads, etc., for dining rooms, it is versatile enough for any room in the house. "Warner Key To Decorating" is offered to the consumer for twenty-five cents.

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The **KITCHEN-AIRE EXHAUST FAN** is different. It is fire-safe, because grease laden air is not drawn over motor. Intake grill may be mounted anywhere, exhaust fan is mounted on outside wall. Connection easily made with six inch stove pipe, hidden in soffit. Stewart Mfg. Co., 318 East St. Joseph Street, Indianapolis.

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The **BURNHAM** Corporation, manufacturers of **BASE-RAY RADIANT BASEBOARDS**, find that thousands of inquiries and installations prove that homeowners, women especially, prefer the space saving advantages and the clean, even, draft-free heat provided by this modern heating method. Also just introduced is the Burnham PB Series Gas Boiler.

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Folks who are interested in getting their lawns off to a good start will be feeding and seeding these first spring-like days. Many will be shopping for **SCOTTS SEED, TURF BUILDER** and other lawn care products . . . they're famous for making lawns of outstanding beauty. For more sales and customer satisfaction, always feature Scotts.

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SPONGEX sponge rubber rug cushion—the finest cushion underfoot; the cleanest cushion under rugs. The best offering of carpet underlay manufacture, yet bought by all income groups for the economy appeal of 173% added carpet life.

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The **KIRSCH** name . . . on products used by millions . . . is known and trusted by three generations of American women. Depend on Kirsch yourself . . . for advanced decorating ideas . . . for well designed quality products . . . for "solid" merchandising and selling aids . . . and for unquestioned consumer acceptance.

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WATERBURY PORTABLE POWER, with all-time record low in maintenance and service requirements, as advertised in House Beautiful, House & Garden, Poultry Tribune and Market Growers Journal — a healthy down payment on continued well being. A good sale which generally brings customers back to retail building supply stores for other supplies.

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IMPERIAL WALLPAPERS—The line that's new for '52! The Imperial line for '52 is a brand new presentation through and through — with scintillating new designs and fashion-favored new colors. To be absolutely sure of seeing or selling new designs and colorations you must turn to Imperial Washable Wallpaper.

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STRAHAN WALLPAPERS in the new 1952 line accent individuality. In color, pattern and texture, each Strahan paper is tastefully different — yet priced within the homemaker's reach. Another newsworthy note, Strahan will be consistently advertised in leading consumer magazines — House Beautiful, House & Garden, Brides and Living for Young Homemakers.

Use *House Beautiful's* prestige prominently on your counters, in your windows, in your local advertising. Send *today* for free "Right from *House Beautiful*" display cards, mounted with advertisements in the March issue . . . for free tie-in newspaper mats.

For cards, featuring advertisements of your own selection, check any or all of the products on the March listing below that are preceded by a number. For a mat, in which product names can easily be inserted, check the square indicated. Fill in your name and mailing address, mail to: Merchandising Division, House Beautiful Magazine, 572 Madison Avenue, New York 22, N. Y.

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2. ANCHOR FENCE
3. BELL & GOSSETT
4. BLUE RIDGE PATTERNED GLASS
* BRIGGS & STRATTON GASOLINE ENGINES
5. BROWN SUPERCEDAR CLOSET LINING
6. BURNHAM BASE RAY RADIANT BASEBOARD
7. CABOT RANCH HOUSE HUES
8. CAMBRIDGE SUNTILE
9. CANVAS AWNINGS
10. CASEMENT HARDWARE WIN-DOR JALOUSIES
11. CHAMBERS GAS COOKING UNITS
12. CHRYSLER AIR-TEMP
13. CINCO THERMOSEAL SCREEN-STORM SASH
14. CRANE CRITERIAN PLUMBING FIXTURES
15. CUTLER HAMMER MULTI BREAKER
* DEMING CUSHIONETTE WATER SYSTEM
16. JOHNS-MANVILLE SPINTEX INSULATION
17. DUBOIS WOVEN WOOD FENCE
18. ELJER PLUMBING FIXTURES
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20. GENERAL BRONZE
21. GENERAL CONTROLS THERMOSTATS
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54. SPONGEX RIPPLE RUG CUSHION
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* TORO POWER MOWERS
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60. U. S. MACHINE
61. UPSON
62. WALLTEX FABRIC WALL COVERINGS
63. WARNER HARDING LEAF WALLPAPER
64. WATERBURY PORTABLE POWER
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65. WATERMAN WATERBURY
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67. WILLIAMSON HEATER
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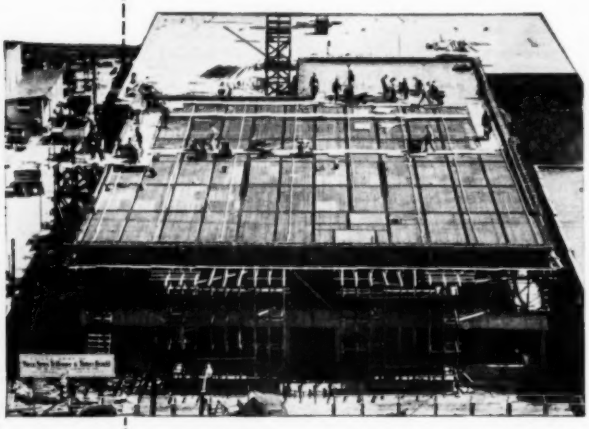
DURAPLASTIC* results in improved surface appearance...at no extra cost



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THERE'S A GOOD REASON why the Moore Construction Company, Austin, Texas, used Atlas Duraplastic air-entraining portland cement for this building. R. B. Moore, Jr., reports that with Duraplastic they get "a more homogeneous, honeycomb-free, plastic and workable concrete with less water bleeding."

That's why so many contractors are specifying Duraplastic cement today. Another reason is *durability*. Duraplastic-made concrete is fortified against the effect of freezing-thawing weather because air-entrainment minimizes bleeding and segregation.

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It sells at the same price as regular cement and requires no unusual changes in procedure. Complies with ASTM and Federal Specifications. For descriptive booklet, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Avenue, New York 17, N. Y.

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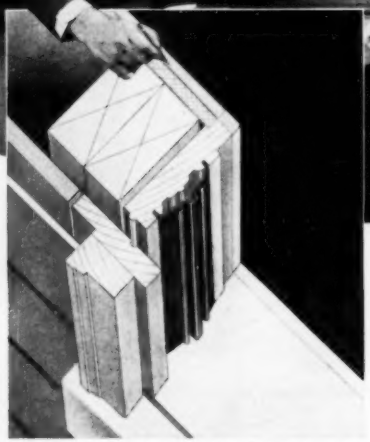
"THE THEATRE GUILD ON THE AIR"—*Sponsored by U. S. Steel Subsidiaries—Sunday Evenings—NBC Network*

What customers want in a window . . . .

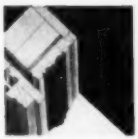
1. Complete weathertight protection!

2. Easy sliding windows at all times

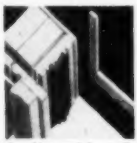
Build Well with BILT-WELL WOOD WORK



Cut-away view of Bilt-Well's exclusive Jamb-liner and weather strip—the secret of the Bilt-Well Window's superiority



25/32" outside sheathing and ¾" lath and plaster on 2x4's—and Superior full width jamb.



25/32" outside sheathing and dry-wall (⅜" or ½") inside on 2x4's, and "Superior" minus inside strip on jamb.

½" outside sheathing and dry-wall (⅜" or ½") inside on 2x4's, cut-off rib on blind stop and remove inside jamb strip.

½" outside sheathing and ⅜" dry-wall applied over ½" insulation board on 2x4's, cut-off rib on blind stop.

BILT-WELL

SUPERIOR Windows have *both* these qualities . . . plus!!!

Laboratory tests prove that Bilt-Well Superior Windows have almost double the weathertight efficiency required by the American Wood Window Institute's specification.

Here's why. The patented Superior Jamb Liner is flexible which means it automatically takes care of expansion and contraction.

And because this problem of expansion and contraction is taken care of, windows fit snugly but slide easily and smoothly under all conditions without the annoyances of sticking and rattling. This unusual ease of operation is also due to the truly counterbalanced sash by overhead spring balances.

There's special news, too, for you who are so closely connected with the building industry. Bilt-Well Superior Windows are now made adjustable to various wall thicknesses. See illustrations.

CARR, ADAMS & COLLIER CO., *Dubuque, Iowa*

Here's a list of the BILT-WELL LINE • *Superior Unit Wood Windows* • *Exterior & Interior Doors* • *Entrances and Shutters* • *Clos-tite Casements* • *Carr-dor Garage Doors* • *Basement Unit Windows* • *Louvers & Gable Sash* • *Combination Doors* • *Screens & Storm Sash* • *Corner (China) Cabinets* • *Ironing Board Cabinets* • *Mantels & Telephone Cabinets* • *Nu-Style & Multiple-Use Cabinets* • *Stair Parts*

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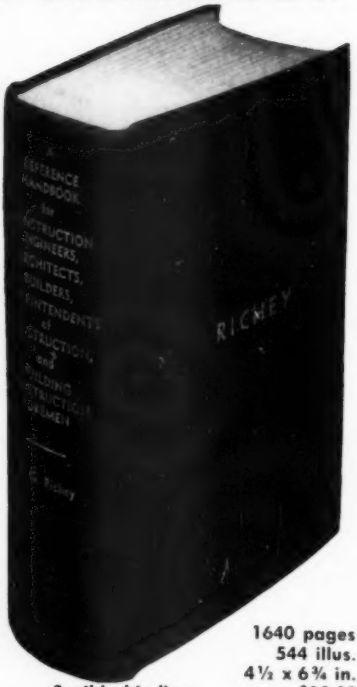
By H. G. RICHEY

DISTRICT ENGINEER (RETIRED), CONSTRUCTION OF PUBLIC BUILDINGS, U. S. TREASURY DEPARTMENT

Here's the book you've been wanting—a working tool and ready reference written specifically to assist the man engaged in building and construction work.



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sell quicker for you!

- **Beautiful**—adds distinction and value to any building
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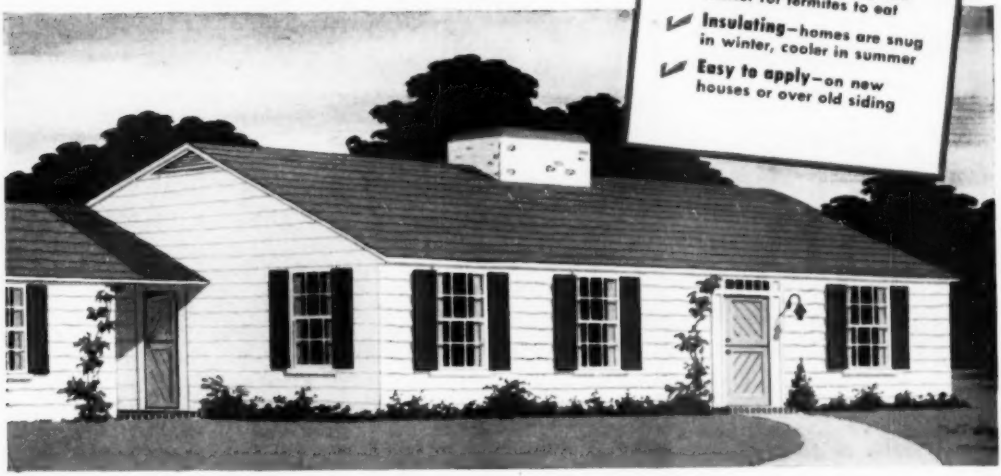

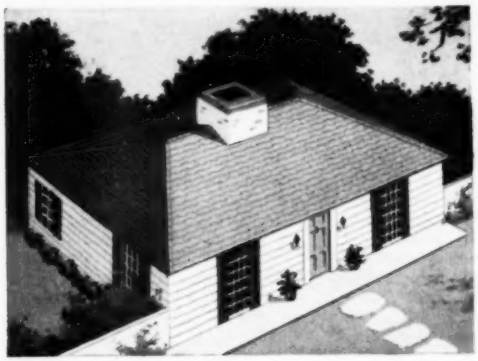

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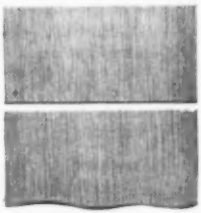
- Deep woodgrain texture
- Straight or wavy edge

4 Popular home Colors—Gray, Greentone Blend, Bufftone Blend, White.



More and more Beautiful Homes have

ASBESTONE Roofing Shingles

DESIGNS AND FINISHES YOUR CUSTOMERS WANT!

Dutch Lap—*Deep woodgrain finish*

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Early American Strip—*Traditional wood-texture finish*

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For homes, stores, offices — For interior partitioning and exterior finishes . . . easy to install . . . fireproof . . . can be painted for color effects. Ideally suited for all types of farm buildings. Available in both "Flexible" and "Utility" grades.

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Specialists in Asbestos-Cement Building Products for Over 25 Years

VENTO STEEL *Casement* WINDOWS

They Give—

Effortless Operation

Gracefully designed, easy-moving Roto or Lever type operators and locking handles, as specified. Extension type hinge for ease in cleaning.

Weathertight Seal

Double contact construction gives snug fit. Positive cam action locking handle insures weathertight seal around perimeter of the ventilator.

Lasting Service

Solid steel sections; all corners electrically welded; cleaned and prime painted. A permanent installation.

Write us for full information, also facts about Vento steel basement, utility and barn windows, Vento steel lintels for cost-saving block construction.

VENTO Steel Products CO., INC.

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LETTERS

Proud of this House

Sir: . . . I am enclosing herewith pictures of the "Small Home of 1951" which you featured in your magazine and which I had the pleasure of building this autumn. This home is 24x30 feet on the foundation and the basement is 16x24, thus leaving one half unexcavated, which I may add, works out very nicely.

By using 2x8 inch rafters with blanket insulation, we find that the

six-inch air space not only makes the house exceptionally warm but we are able to use a 60,000 Btu Janitrol to good advantage.

I am proud of this house, and wish you could see how compact, yet spacious, the interior is. The slope of the ceiling is not noticeable, in fact, it gives it a homey look.

I, for one, am sold on a home without an attic. No attic means no ghosts, no memories, or old clothes.

John E. Taylor,
Mansfield, Ohio

▶ Mr. Taylor built a National Home Week house featured in the *American Builder*, pages 132-133, July, 1951. The house is a Weyerhaeuser Plan No. 4144.—The Editor.

Out-Pulls All Others

Sir: A recent study of cost per inquiry among all the trade journals that use our industrial campaign shows that *American Builder* outpulls all others with the exception of the directory type publications. It is about par with these latter publications, but it is our feeling that the reason the directory type publications pull so well is that our other advertising has done the selling job.

This *American Builder* record does not include the two page insert that we ran in April of last year, which pulled the largest number of inquiries, by far, of any trade journal advertisement Bostitch has ever run.

Part of this good record is no doubt due to the fact that the building trade is definitely interested in self-feeding hammers and tackers and *American Builder* very apparently reaches this particular market very thoroughly. Needless to say, Bostitch is well satisfied with the job *American Builder* is doing for us.

S. L. Smith,
Advertising Manager,
Bostitch, Inc.

Grand Job

Sir: You might be interested to know what a grand job *American Builder* is doing for us in obtaining "leads" for new dealers to erect and sell our Peaseway Homes.

Our campaign featuring new contemporary Peaseway Homes apparently has met with success through the pages of your magazine and your readers.

George R. Smith,
Advertising Manager,
Pease Woodworking Co.

Sir: . . . We think the *American Builder* has done an outstanding job for Kwikset, and we hope that our new use of position and color form advertising in 1952 will produce even more gratifying results.

B. D. Cirlin,
Director of Marketing
Kwikset Locks, Inc.

Information Please

Sir: I was pleased to see your new service "Ask the Experts." I feel that it will be of great benefit to your readers. I would like to have a table of safe loads for dimension beam material, Douglas fir, 2x4 through 6x12 by one foot spans from 4 through 20 feet.

To clarify, if I want to know the safe load in pounds of a 4x8 inch with a clear span of six feet I can look at the table and readily tell what it would be.

I am not in the least certain there is such a chart, but feel confident there must be. Any information you could give me as to where to purchase same would be greatly appreciated.

If none is available perhaps you could give me a relatively simple formula for determining the safe load for any given size beam with any given clear span.

John Kinsman,
Portland 22, Oregon

▶ A table is available from your local FHA office. The booklet is titled "Tables of Maximum Allowable Spans for Wood Floor Joists, Ceiling Joists, Rafters, In Residential Construction." No

(*Continued on page 44*)

Today — VIBRAPAC Modular Concrete Masonry Units are available in a variety of attractive designs. These designs enable any architect or builder to originate plans that will give a home, or other building structure, both pleasing appearance and individuality.

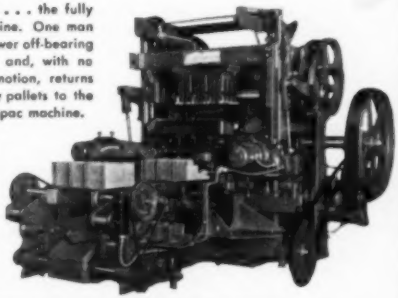
Besser Super Vibrapac machines are versatile. They make ALL types and sizes of high-quality masonry units on ONE set of Plain Pallets. What's more, the Vibrapac machines are fast and dependable. They set the pace for modern, automatic production and handling devices, producing maximum output of high-quality block with no down time.

Sell your customers on the BEAUTY as well as PERMANENCE of Vibrapac Concrete Masonry for both exterior and interior construction. It assures a lifetime of better, safer, more satisfactory living.

BESSER MANUFACTURING CO., Alpena, Mich., U. S. A.

Front Pallet Feed VIBRAPAC . . . the fully automatic concrete block machine. One man removes finished block with power off-bearing hoist and, with no lost motion, returns empty pallets to the Vibrapac machine.

FREE BULLETIN — Ask for copy of bulletin illustrating the many standard masonry units that can be made on a Vibrapac.



BESSER

BATCH MIXERS | SKIP LOADERS | BLOCK & BRICK CUBERS | **SUPER VIBRAPAC** | SINTERING PLANTS | ACROW CENTERS | ROOF TILE MACHINE

3 BIG REASONS WHY IT PAYS TO BUY AMERICAN FLOOR MACHINES • PORTABLE TOOLS

Builders who have American Floor Machines and Portable Tools on their "production team" know that American helps them *save labor, save time* and *reduce costs!* Here's why—

When you buy American you get machines of advanced design that perform day in and day out with high speed and accuracy . . . machines *built to last,* produced with skill and precision to highest quality standards . . . machines that *keep producing* without long and costly delays when service is required. There are American Service headquarters near you in 35 principal cities all over the United States. These distributors carry a complete stock of original replacement parts and maintain a factory-trained service department. All this is backed by American's know-how of nearly 50 years as pioneer producers of floor machines and finishes. Send coupon for latest catalogs.

SEND COUPON!

SERVING THE BUILDING INDUSTRY SINCE THE TURN OF THE CENTURY

The American Floor Surfacing Machine Co.
511 So St. Clair St., Toledo 3, Ohio

Please send latest catalog on the following, without obligation:

☐ Floor Sanders ☐ Floor Edgers
☐ Portable Electric Saw ☐ Floor Finishes
☐ Floor Maintenance Machines ☐ Belt Sanders
☐ Scinta Saw

Name _____
Street _____
City _____ State _____

Letters . . .

(*Continued from page 42*)

simple formula can be given you that would take the place of the table as span stresses vary with the types and grades of the lumber.—The Editor.

Haven't You Heard?

Sir: In the November, 1951, issue of your good magazine we noticed that someone was pointing out how clothes closet poles could be installed. It is quite apparent that they had not heard of a very handy item which we manufacture and distribute known as pole sockets.

Roy C. Walasby, Manager,
Burke Millwork Company

Very Successful

Sir: Mr. William Tobin suggested that we forward to you pictures that were taken during National Home Week. One of the pictures shows the crowd inspecting our model home; the other, is a picture of Charles A. Ginnetti, (Past President of the Atlantic Home Builders' Association) —presenting a radio that was given as one of the door prizes.

During National Home Week our project was inspected by a great number of people—more than we had figured. The only house in the group that was completed was sold the second day of National Home Week.

According to my experience, this Week was very successful, and should be carried out throughout every city and town. From the number of people that inspected the homes, we have around 300 prospective buyers from our small community of Ventnor (a suburb of Atlantic City) which has a population of only 12,000 people.

C. A. Ginnetti,
Atlantic City, N.J.

(*Continued on page 46*)

Talk about FAST ADJUSTMENT

...Look what LECTRO-SAW gives you!

PLUS

- Abundant Power
- Easy Handling
- Maximum Safety
- Job Versatility

PLUS

POPULAR PRICES!

- 6" Heavy-Duty ... $56.50
- 6" Deluxe Heavy-Duty ... $76.50
- 8" Heavy-Duty ... $92.50

See Your Building Supply Dealer for a convincing demonstration of Lectro-Saws, Lectro-Blades and handy, new Protractor. Learn how they pay for themselves in a few jobs! WRITE FOR FREE CATALOG!

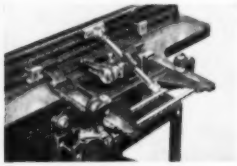
PERFECT!

For On-The-Job Cabinet Work

Equipped with Sealed-for-Life Ball Bearings

Atlas 6" JOINTER

New type fence mount assures fast set up — greater rigidity and accuracy.



Cutter head removes for sharpening blades without disturbing their setting!

Here's a good way to cut costs and increase profits on contracts this year. Use this Atlas jointer for all cabinet work — planing, edging, truing, rabbeting and beveling.

Two men can move it in (weighs 138 lbs. without motor) and you're equipped for faster, more accurate planing of doors, cabinets, drawers, and fine finishing of all kinds.

BIG, PRECISION-GROUND TABLE

You'll find the big work surface of the Atlas particularly useful. Table is 42" long. Solid two-way tilting fence is 32" long and 4½" high. Exclusive Atlas features include width of rabbet scale, simultaneous blade positioning, heavy 2¾" diameter removable cutter head.

Whether you use this Atlas jointer to "mass produce" your built-in units, or handle planing on the job, it's a real money maker. Send for latest catalog with complete details.

ATLAS PRESS COMPANY
139 North Pitcher St., Kalamazoo, Michigan

Atlas

DEPENDABLE QUALITY TOOLS SINCE 1911

Letters . . .

(*Continued from page 44*)

Is Your Suggestion The Cure?

Sir: Re "Preventing Bathtub Slipping," your reply to E.T.Y., page 94, November. . . . Granting that this problem has bothered many, I wonder if your suggestion is the cure?

The sketch shows, except for one small detail, the customary construction and usual foundation for the tub. To this point the tub, sitting on the shiplap, or subfloor, and the stud wall are both supported by the joists, not shown. It is generally accepted that all lumber has a certain amount of shrinkage across the grain. Here both joist and subfloor are susceptible to shrinkage and therefore both the tub and wall may be assumed to have the same amount of settling and no problem should be present.

In ordinary construction the single plate or sole under studs creates the possibility of additional shrinkage which would create a pinch and theoretically, at least, a pealing or cracking of plaster. . . . Your sketch shows a double sole under the stud. I do not believe this customary and if used would increase the settling of the stud.

John E. Kelly Jr.,
Seattle 6, Wash.

▶ You are right, the double sole does not help the situation. The drawing is a draftsman's error. Commercial tub supports have been doing a fine job in reducing the tendency of tubs to settle.—The Editor.

Thank You!

Sir: Thank you very much for sending us two copies of the November issue of the *American Builder*. We are more than pleased with the description, plans, and details of our model home. Your interest in our houses and development is greatly appreciated.

We look forward to having you visit our subdivision again.

J. A. Miedema,
Marviray Manor,
Aurora, Ill.

▶ We have many fine comments on your house which appeared in the November issue as Blueprint House No. 59.—The Editor.

• *Letters to the Editor should be sent to 79 W. Monroe St., Chicago 3, Ill. Your comments are invited.*

What's *YOUR* sidewall problem?

FINISHING?

With SHAKERTOWN SIDEWALLS, more homes are completed faster at minimum cost. The fast, easy application means less skilled labor required.

WEATHER?

Because they're factory-stained, SHAKERTOWNS come ready to apply, regardless of rain or snow. Costly weather delays are eliminated.

SAVINGS?

SHAKERTOWN SIDEWALLS increase the property value, hold down the cost of upkeep. Cut down fuel bills in winter; keep homes cooler in summer.

SUPPLY?

Deliveries are faster because SHAKERTOWN plants, warehouses and distributors are strategically located throughout the United States. All are equipped for main-line rail service.

SELLING?

SHAKERTOWN SIDEWALLS build homes of distinctive styling and appearance. Deep shadow lines and rich colors enhance the beauty of architectural design.

REMODELLING?

Old homes take "a new lease on life" with double-coursed SHAKERTOWNS applied right over any type of existing sidewall material. A ship-lap nailing guide is all you need to do the job.

SHAKERTOWN Sidewalls Solve Them All!

If you're not now selling these premium grade, double-coursed, sidewall shakes, find out how you can sell more and profit more with SHAKERTOWN SIDEWALLS. Folders, literature, displays—in color—plus a host of other sales aids are available.

For full details, wire or write the address below — today.

WEST COAST PLANT—CHEHALIS, WASHINGTON

The PERMA PRODUCTS Company

PERMA — EXCELLENCE OF QUALITY

5455 BROADWAY AVE. CLEVELAND 27, OHIO

Serious strain?

Yes, it's quite a strain on the cord that weights windows. That's why, in the long run, it pays to use and recommend the *best!*

SPOT® SASH CORD

TOUGH
SOLID
BRAIDED
COTTON

WEAR
RESISTANT

PLIABLE FOR
EASY
INSTALLATION

Look for the colored spots, our registered trade-mark, your guarantee of quality. For new installations or replacements, use and recommend wear-resistant, long-lasting Spot Sash Cord.

Samson
PRODUCT FOR LASTING ECONOMY

Samson
CORDAGE WORKS
BOSTON 10, MASSACHUSETTS

ON and OFF the Record

$150 SUBSCRIPTION—Probably the first subscriber in the history of business journal readers to pay $150 (no, no decimal point was omitted, it's really $150) for a three-year subscription, has just joined *American Builder's* professional readers.

IT'S THIS WAY—The new subscriber, whose name is purposely withheld, is a professional builder in Sao Paulo, Brazil. When he sent in his subscription he remitted the standard three-year price. To that he added the cost of sending each of the 36 issues he will receive by air mail to Sao Paulo. Total, $150.

TOPS—A few months ago we thought we really had something in the way of a record when four carpenters wrote their names, addresses, and classifications on a piece of D-M sheathing and threw it down from a roof to a member of our staff. The inscribed sheathing was a subscription order. But, this $150 order tops that.

GARBAGE GRINDERS — Until you've met Roger Given and his enthusiastic staff in their electric garbage grinder plant in Los Angeles you are not likely to understand fully what a prominent part the relatively new idea of grinding garbage and flushing it down the drain is playing in raising the whole standard of American living to a new level.

THE FULL COURSE — Three members of the *American Builder* staff got the full course in a four-hour exposure recently. And if the aforementioned enthusiastic staff comes through with all the important and useful information they have on the subject of the class of products they manufacture, readers of this magazine are due to learn a lot on the subject.

DICK HUGHES—Can you imagine a big—really big—very modern office building in a city with a population of 17,000? Of course not. But, then, you can't imagine Dick Hughes. You have to see him and know him. The same is true of the Hughes Building in Pampa, Texas. It's big, it's modern, it's beautiful, and it's full of tenants. You have to see it to believe it. And it took a lot of courage to build it.

PAMPA, TEXAS—For that matter, have you ever heard of Pampa, Texas? Probably not. It's in the Texas Panhandle. Anyone who knows about carbon black knows about Pampa. It's the carbon black capital of the universe.

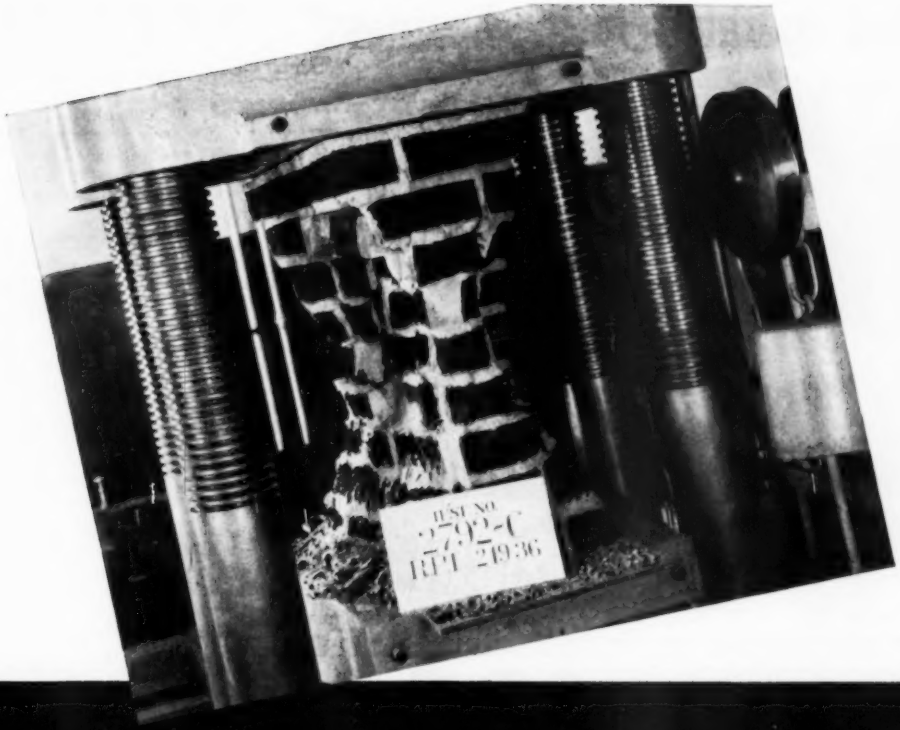
LYNN BOYD—But like the beer that made Milwaukee famous, the man who first made the building industry conscious of Pampa is Lynn Boyd. He started doing it about ten years ago when he first appeared as a national director from Texas on the board of the National Retail Lumber Dealers Association. He brought with him a keen mind and winning personality that quickly raised the question as to where he came from.

HOO-HOO—In a short time, every prominent lumberman in the country knew all about Pampa. They didn't find out from Lynn. They had to get their information from someone else. Then, he became the Snark of the Universe of the International Concatenated Order of Hoo-Hoo. The quality of his leadership in this lumbermen's fraternity really made Pampa famous. Between Hughes and Boyd, is there anyone left who doesn't know all about Pampa?

SPEAKING OF TEXAS — It's hard to do without mentioning Grover A. Godfrey, the dynamic executive vice president of the Home Builders Association of Dallas. Recently he wrote, "Tighe Woods spouted off with a barrage of Trumanscare philosophy in Boston recently . . . Dallas folks won't forget a former visit of this show-off 'boogey' man when he gave us a verbal demonstration of his bureaucratic chicanery. The man suffered from a terrible case of mental astigmatism or, to be charitable, his statements were deliberate falsehoods. His misrepresentation of facts made it easy for Dallas, and the State of Texas, to banish rent controls by legislation." Trust Mr. Godfrey to know what he wants to say, and always to be able to say it exactly.

HOUSE OF BELLS—One of the most charming and beautifully engineered houses in the country has been named aptly by its owners and creators, Mr. and Mrs. W. C. Bell, of Edmonds, Washington, "The House of Bells." Bill Bell is the executive officer of the Western Retail Lumbermens Association. The Bells' host of friends all over the country have sent them dozens of unique bells.

(*Continued on page 50*)



BRIXMENT

assures stronger walls!

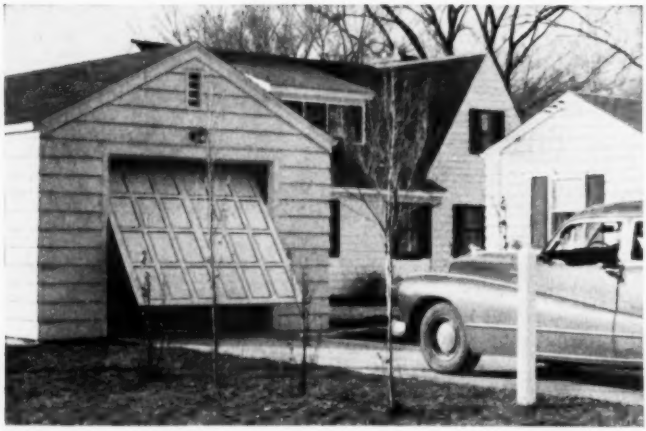
BRIXMENT exceeds the strength requirements for masonry cement (both Type I and II) of the American Society for Testing Materials' Specification C91-49 and the Federal Specification SS-C-181b. Type II is usually specified when high strength is required.

When Brixment mortar is tested in compression between two brick, at 28 days or later periods, the brick usually crack before the mortar fails.

The strength of piers laid with Brixment mortar approaches the strength of piers laid with straight portland cement mortar.

LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

"Best operators in the business!"



RICHARDS-WILCOX AuT-o-DoR®

Electric Operators

open and close garage doors automatically

Here you see the perfect answer for every home-owner who wants garage doors that open and close automatically—the R-W No. 1251 AuT-o-DoR Electric Operator, especially designed for opening and closing sectional or one-piece type residential overhead garage doors.

Easy to Install—R-W No. 1251 Operators come completely assembled in a single carton, ready to install and hook to AC current. Especially recommended for R-W 999 Garage Doors.

Easy to Service—Long life self-lubricating oilite bearings are used throughout. Roller chain is completely enclosed. Tension of chain is easily adjusted. V-belt drive has automatic adjustment. No special tools required to service any parts in this operator.

Choice of Three Controls—Three different types of controls are available, as shown above. Each type functions smoothly and efficiently. Send for catalog A-87 with detailed information about R-W No. 1251 AuT-o-DoR Electric Operators—write our nearest office today.

1880-1951

OVER 71 YEARS

Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT SLIDES"

AURORA, ILLINOIS, U.S.A. *Branches in all principal cities*

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INDUSTRIAL CONVEYORS & CRANES • SCHOOL WARDROBES & PARTITIONS
ELEVATOR DOOR OPERATING EQUIPMENT

On and Off the Record

(*Continued from page 48*)

JONES AND PETERS—The ancient C & O railroad bell sent by Bob Jones of Philadelphia and the old pre-Civil war plantation bell sent by Lisle Peters of Lake Charles, La., are perhaps the most prized. Each is mounted on a post flanking the parking area.

ANNUAL REPORTS—The best of the year, at least, and perhaps the best in many years was that made by W. W. Woodbridge, manager of the Red Cedar Shingle Bureau, to his annual meeting in Seattle in December. Mr. Woodbridge recited two nursery rhymes—Jack and Jill, and Humpty Dumpty. That was all there was to the report, but to anyone aware of the Bureau's problems, Mr. Woodbridge could not have said more in an hour than he did in the two minutes he took.

BILL ATKINSON—NAHB's dynamic 1951 president was addressing dozens of local associations of home builders in the weeks preceding Christmas. In each of them he proposed a program—an 11-point one. Here it is:

1. Cooperate with city officials to clear slums.

2. Insist on enforcement of local health and sanitary laws.

3. Do a better job in low-cost housing.

4. Intensify a strong field research program.

5. Do a good job on military and defense housing.

6. Take care of complaints promptly—police our industry.

7. Urge all members to give a reasonable and equitable warranty to home purchasers.

8. Give constructive and enlightened cooperation to government administrators and members of Congress.

9. Continue to increase association membership, prestige and strength.

10. Do not forget that controls at best are bad—re-examine them often—rid ourselves of them as soon as possible.

11. Finally, for those few in Washington and elsewhere who seem determined to socialize our industry—let us with more vigor than ever, declare war on them to their finish!

THE PROGAM—It's complete, and practical. All of it can and should be accomplished. It will be if it has the united support of all members of all branches of the building industry.

(*Continued on page 52*)

this
famous
name

TIMKEN
Silent Automatic
HEAT
OIL · GAS · FUEL
TIMKEN SILENT AUTOMATIC DIVISION
The Timken-Detroit Axle Company • Jackson, Michigan
The Timken-Detroit Axle Company of Canada, Ltd., Toronto, Ont.
Accepted STA Standard
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sell

OIL AND GAS FURNACES, soundly constructed to highest quality standards, provide the finest in winter air conditioned heat. Fired by wall-flame burners.

your
homes
faster!

93 models of oil- and gas-fired furnace and boiler units from which to select the *right* model for the homes you build. Oil-to-gas conversion kits and water heaters, too!

SEE OUR CATALOG IN SWEET'S

Consult your Sweet's File for performance data and specifications, or write directly to Timken Silent Automatic, Jackson, Mich., for a copy of our catalog.

MULKEY

ALL-STEEL PORTABLE ELEVATOR

CUTS BUILDING COSTS

Check These MULKEY Features

- Balanced and portable.
- One man can handle and operate.
- Handles 750 lbs. load on 45° lift.
- Eliminates hoisting, toting, wheeling up.
- Fully adjustable 5 ft. to 28 ft. Extension sections simply bolt on.
- New Trailer Hitch permits towing by car or truck.
- All steel, electric welded, bridge-type construction.
- Power: Either 4 HP gasoline engine or 1½ HP electric motor (normal use).

Forty-foot Mulkey carrying 16 blocks per minute to second floor level 23 ft. up.

Mulkey Elevators cut building costs because they save labor and time. Whether it is bricks, blocks, mortar, cement, sand, boxes, crates, sacks, lumber, roofing or dirt . . . your Mulkey Portable Elevator moves it upward to its proper place . . . quickly and easily. Yes, Mulkey Elevators raise everything *but* your labor costs . . . *lowers* those.

Write for Prices and FREE Literature today!

SAM MULKEY COMPANY

1621-AB252 Locust Street **Kansas City 8, Missouri**

On and Off the Record

(*Continued from page 50*)

HRF—That's the alphabetical designation for Housing Research Foundation of the Southwest Research Institute. HRF's director, C. W. "Bill" Smith, recently announced a new and very attractive seal for Certified Quality Houses, the ones recognized by the Foundation as embodying the best in modern design and construction practices, resulting from research.

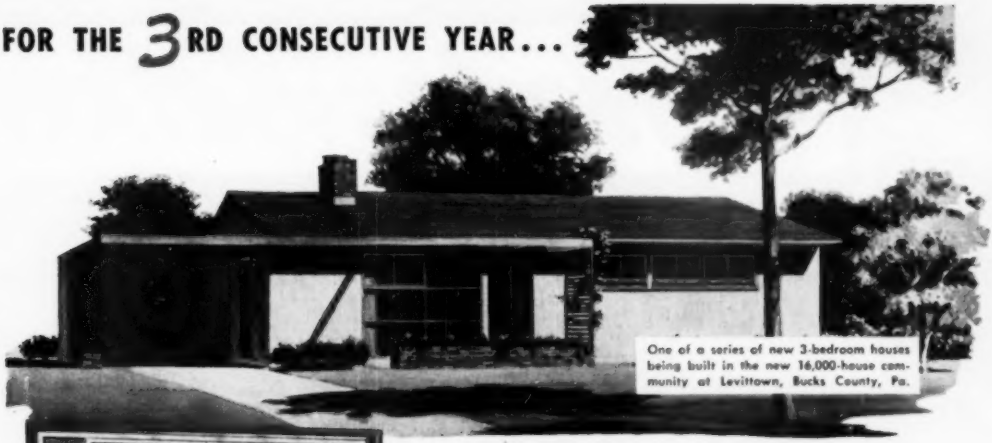
BUILDING COSTS—They are increasing faster than builders can raise their prices. According to many builders, few local VA or FHA officials recognize cost increases.

H. E. HOLMAN—He is assistant director, Lumber and Wood Products Division, NPA, Washington, D. C. Mr. Holman, a well known figure in the lumber industry of the Pacific Northwest for many years, is an emergency volunteer in NPA work. He is the kind of civilian who rates a salute from every business man for sacrificing a lot in the interest of the government need.

HIS SPEECH—He delivered a deeply inspiring speech at the Red Cedar Shingle Bureau annual meeting in Seattle. In it he said, "Whether we preserve our heritage and are able to pass it on to the next generation will depend upon how much you and I, and all the rest of the people in the United States, are willing to sacrifice and contribute to the building of a strong national defense. It seems to me that as a nation, we have spent too little time in self analysis to make a determination of 'Who am I and where do I stand' in respect to the subversive forces that would destroy the foundations of the country. Conflicts are not won by force of arms alone. The most potent weapon is the determination of people—their honesty, integrity, unselfishness, and a full appreciation of their neighbors' right to enjoy the privileges of a free republic."

TEAM SPIRIT — It's that last about the determination of the people that is especially important. Every athletic coach knows that a mediocre team, fired with an unquenchable will to win, can take a lackadaisical champion apart with inspired team work. The same is true of the United States today. It is far from being a mediocre team. It probably is the champion, but it will vanquish the Red threat only if the people themselves decide that no sacrifice is too great to insure victory.

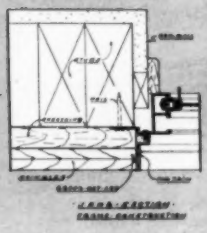
FOR THE 3RD CONSECUTIVE YEAR...

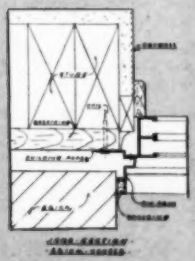


One of a series of new 3-bedroom houses being built in the new 16,000-house community at Levittown, Bucks County, Pa.

NEW FIN-TRIM

- eliminates wood buck!
- saves installation time!
- reduces materials costs!





Send for complete installation details

LEVITT & SONS, INC. *again* SELECTS ALWINTITE ALUMINUM *Sliding* WINDOWS

In line with the long standing policy of Levitt & Sons, Inc. of offering home buyers the most in comfort, in convenience, in simplified, easy-on-the-pocketbook housekeeping, Levitt's new 1952 houses will again feature ALWINTITE aluminum sliding windows.

Used in more than 9000 Levitt built homes on Long Island during 1950 and 1951, ALWINTITE aluminum windows proved to be one of the most popular features of these amazing houses. Smart, trim appearance; always easy to open or close; complete removal of sash for cleaning or full ventilation; never any painting; no rust streaks; more room for easy furniture arrangement—these and a dozen more reasons explain why home owners are so enthusiastic about ALWINTITE windows.

ALWINTITE sliding windows are available in 4 standard sizes for installation with wood buck or with special FIN-TRIM in 7 modular sizes.

The simple, easy installation of ALWINTITE windows saves time, labor and materials. Investigate the money-saving advantages of these popular new windows today. Write for catalog, installation details, prices and name of nearest ALWINTITE dealer. Address Dept. AB-2.

ALWINTITE DIVISION

GENERAL BRONZE CORPORATION

Stewart Avenue • Garden City, N. Y.

DOUBLE-HUNG WINDOWS • SLIDING WINDOWS • VIEWall WINDOWS

Visit our Booth No. 232, Hotel Stevens, NAHB Exposition

More Insulation
COMPARE THESE BIG ADVANTAGES
1. More Insulation—yet cost less than some ordinary blankets. Won't settle or sag, leaving thin spots that leak heat. A single length gives uniform, uninterrupted insulation from ceiling to floor.
2. Cleaner, Easier to Handle—thanks to the neat, durable paper casing which also assures more secure installation.
3. Faster Application—less cutting and fitting means less waste and thriftier, speedier application. Flanged for quick, easy stapling or nailing.
4. Unbroken Vapor Barrier—continuous from ceiling to floor, provides more effective protection from condensation within wall, ceiling and roof structures.
5. Permanent—rock wool cannot rot, is fireproof, insulates efficiently for the life of the building.

Value for less money

WITH THE POPULAR NEW

CELOTEX

REG. U. S. PAT OFF.

8-FOOT, SEMI-THICK

ROCK WOOL BLANKETS

You can make your homes *more* comfortable, *more* salable at *less* cost . . . with the new, improved 8-ft. Semi-Thick Celotex Rock Wool Blankets!

Compare insulating efficiency. Compare ease and speed of installation. Compare cost with the insulation you are now using. You'll see then why more and more builders all over the country are changing to Celotex 8-ft. Semi-Thick Rock Wool Blankets!

Celotex Rock Wool Blankets come in 4 and 2-ft. lengths, as well as the new 8-ft. length. Semi-thick or full-thick. See samples at your Celotex Dealer's today!

* * *

Celotex Hand-Pouring Rock Wool

Where *rock-bottom* cost is a "must," insulate attics with Celotex Hand-Pouring Rock Wool! One 40-lb. bag covers 25 sq. ft. to a depth of 3". Specially processed into pellets just the right size for *easy* pouring directly from the bag into open attic joist spaces and other areas.

To make your home easier to sell...

BUILD WITH GENUINE

CELOTEX

REG. U. S. PAT. OFF.

BUILDING PRODUCTS

THE CELOTEX CORPORATION • 120 S. LA SALLE ST. CHICAGO 3, ILLINOIS

IMPORTANT!

Remember, over a quarter century of consistently effective advertising in *The Saturday Evening Post* and other popular national magazines, has created *nationwide acceptance* for Celotex Products. That's another important reason why homes insulated with Celotex Rock Wool Products are *easier to sell!*

TECHNICAL GUIDE for Builders and Craftsmen

The SCR Insulated Cavity Wall

POURING-TYPE Fiberglas cavity wall insulation for use in the SCR (Structural Clay Research) insulated cavity wall, has been developed by the Owens-Corning Fiberglas Corporation.

This development is making possible improved masonry wall construction together with actual savings in cost. The SCR Insulated Cavity Wall, with all its advantages of heat savings, greater protection and more comfort to the occupants, can be less expensive to construct than an uninsulated, furred and lathed masonry wall. The new construction, basically the same as the conventional cavity wall which consists of two relatively thin sections or wythes of masonry separated by a continuous air space not less than two inches wide, eliminates costly furring and lathing while adding an inexpensive moisture barrier protection and insulation. (See September '51 issue *American Builder*, page 50.)

This type of wall has a heat transmission value, U, of less than one-half that of the uninsulated, furred and lathed wall. Indoor comfort is improved by a 5 to 8 degree increase in inside wall temperatures over the uninsulated construction.

The new pouring-type Fiberglas insulation is used in the SCR cavity wall because it was found to have good thermal resistance, a low enough density to support its own weight without settling, and for its ability to resist moisture. Handling of the material is easy, resulting in saving in labor time.

In the construction of the SCR insulated cavity wall, non-rusting metal ties are used to tie together the two wythes. The inner wythe is built upward, ahead of the exterior wythe by at least 16 inches. The inner wythe, after its cavity side is smoothed, is given a brush coat of vapor-resistant water emulsion asphalt paint.

FIBERGLAS CAVITY WALL INSULATION is poured from paper bags containing enough insulation to fill from 37 to 45 square feet of wall with a cavity of 2 to 2½ inches wide. Insulation is poured into cavity when wall reaches window-sill height

Why does "rain" often form inside roof spaces of a crowded store or school? (pages 19, 32)

Why does moisture gather on a water-and-vapor-proofed concrete floor? (page 32)

Why is it wrong to vent cold roof spaces to a warm inside space? (page 33)

Does a concrete floor slab lose heat only at the edges? (page 40)

In what direction does heat flow by Conduction? Convection? Radiation? (pages 11, 15)

Do "dead air spaces" exist with respect to heat flow? (page 16)

Why do metals radiate and absorb less heat than wood, plaster, rockwool? (pages 13, 46)

Why replace low-conductive air with denser materials of greater conductivity, i.e. ordinary insulation. (pages 11, 13, 14, 29)

The answers to these and numerous other problems of heat and vapor flow are found in the pages of the New Edition of

SIMPLIFIED PHYSICS of Vapor and THERMAL INSULATION

By Alexander Schwartz

Written in simple language easy to understand, yet accurate and complete enough to gratify the scientist. Crammed with information the engineer, architect, public official, builder, contractor, insulator, heating installer, need. Hundreds of universities and technical schools use previous editions as a text.

56 pages of Facts, Figures, Charts, Illustrations, and Explanations of Heat and Vapor Flow; Vapor Permeability; Condensation; Dry Rot; Conduction and Density; Convection; Radiation and Emissivity; Reflection and Absorption. Suggests solutions and illustrated techniques for practical problems of insulation installation, condensation, protection against heat loss or intrusion, radiant heating; cold storage.

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TABLE OF ABSORPTIVITY AND EMISSIVITY OF MATERIALS
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CHART OF THERMAL INSULATION VALUES

These 2 charts are indispensable to anyone interested in building and heating. THE VALUABLE MANUAL IS FREE! Just fill in the coupon below.

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TECHNICAL GUIDE for Builders and Craftsmen

The coating serves as a vapor barrier. A water emulsion type is used because it can be applied cold to a newly-laid wall. Fiberglas cavity wall insulation is poured into the cavity when the wall reaches window sill height, and, after that, at convenient levels.

Because the insulation is poured, care is taken by the mason during construction of the wall to smooth the mortar squeezed from the joints on the inside of the cavity. This operation prevents the insulation from catching onto rough ledges as it is poured into the space.

The structural design of the brick and tile cavity wall is unchanged. Instead of furring and lathing, the plastering may be done directly on the backup material or, where the design permits, the interior masonry may be left exposed.

Construction and design techniques used for the insulated cavity wall are similar to those for the conventional, uninsulated cavity wall. No changes are required in the location of wall ties, installation of flashing, window and door frames, joists, wall plates and in the methods used for providing weep holes to allow adequate draining of the cavity. The two added operations are easily accomplished:

(1) SMOOTH OUT MORTAR ON CAVITY FACES. This is done with the flat of the trowel as each brick or tile is laid, to provide a relatively smooth surface for pouring insulation and thus to obtain a completely filled air space. The usual precautions should be taken to prevent mortar droppings from plugging weep holes.

(2) APPLY VAPOR BARRIER PAINT TO CAVITY FACE OF INNER WYTHE. This is best accomplished by smoothing the cavity face of the inner wythe and painting or spraying it with a heavy coat of vapor-resistant, water-emulsion asphalt paint. Water emulsion asphalt is recommended because it can be applied cold.

IN THE MASONRY-TYPE WALL CAVITY CONSTRUCTION the type of insulation used must offer good thermal resistance and low density to support its own weight without settling and must resist absorption of moisture

DO NOT TAMP THE INSULATION. The insulation should be poured into the cavity and allowed to assume its natural density. Tamping will raise this natural density and adversely affect the performance of the wall.

THE INNER WYTHE of the insulated wall cavity, which uses pouring type Fiberglas insulation, is built upward, ahead of the exterior wythe by at least 16 inches. This allows for smoothing of the cavity side of the inner wythe and for application of a coat of vapor resistant water emulsion paint. The paint may be applied by brush, as shown in photo, or sprayed. The water-emulsion type coating is used because it can be applied cold to a new wall

teamwork that solves problems

The R.C.A. line fits easily into so many specifications, providing the answer to rigid requirements of wall and floor covering needs. Whether it be the extensive line of 28 colors, ensemble planning, ease of installation and maintenance, adaptability and life-long economical utility — R.C.A. has everything to simplify your job of overall satisfaction.

WALL-FLEX

walls of rubber. New — exclusive — flexible 1/16" gauge fabric back rubber in 28 colors. Simple, quick one-man installation with the advantages of continuous corners and curved surfaces, sanitation, low maintenance and economy. You'll want to include the versatility and colorful beauty of Wall-Flex in your plans.

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floors of rubber. Available in 28 colors, sheet or tile form. 3/32", 1/8" and 3/16" gauges. This complete range meets a diversification of uses, with all the resilient, silent, sanitary, life-long and economy advantages of R.C.A. rubber.

ACCESSORIES

design-planned to complete the ensemble. Feature strips — borders — cove base — corners — tread runners in the same 28 colors — of the same dependable R.C.A. rubber. Everything you need for complete planning.

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CONSULT YOUR SWEET'S
Architectural File or write for full color brochure — samples and installation folder.

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ORNAMENTAL IRON

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SAVES TIME

. . . and it's tops in preference with the home owner

Porch Post? Rail? Coffman Ornamental Iron looks better than wood or brick . . . costs less . . . and lasts forever. Coffman Ornamental Iron lends itself to any type architecture, has a rapid consumer turnover and makes possible greater profit for both the dealer and contractor. Installation is as simple as ABC.

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. . . . at Lumber and Building Supply dealers everywhere. Stock sizes to fit any porch.

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America's Largest Manufacturer of Ornamental Iron

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ORLANDO, FLORIDA.

TECHNICAL GUIDE for Builders and Craftsmen

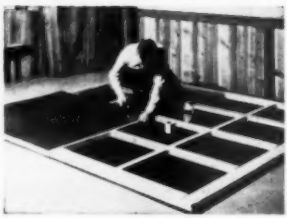
Building a Garage Door

The application of hardboard as a surfacing material over a wood frame is illustrated in the design and construction of this garage door.

Framing members are 2x4's with 2x2's to form intermediate panels. After 3/16 inch hardboard is conditioned, it is secured to the frame with waterproof glue and nails.

Data and photos courtesy Masonite Corp.

ABOVE: Laying out the 2x4 frame after measuring opening and allowing clearance for door to swing easily. Three nails are used in each joint. Condition hardboard by applying cold water to back side, scrub with a broom and let it lay 24 hours before applying



ABOVE: Three eighths inch holes are bored through bracing members to ventilate the door after hardboard is placed on both sides. LEFT: After hardboard is conditioned it is nailed to the inside of the door after contact points are glued. Nails are 6" apart

ABOVE: In hanging the roller, unit is bolted to the framework of the door so it is in alignment with the track which has been fastened to garage. Door is propped up on shims in opening for fitting and application of hardware

ABOVE: Tension on the spring is adjusted for easy operation of the door, which is shown in its "up" position. Installation is now complete. LEFT: Builder tries out the new door and finds it to his liking. It is ready for paint

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SENSATIONAL NEW

Creo-Dipt OPTIONAL KOLOR PLAN

- Lifts Color Limitations on Stained Red Cedar Sidewalls
- 20 Popular Pastel Shades from which to Choose
- Customer Choice of Color Helps your Homes Sell Faster
- Conceals all Construction Blemishes
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- Saves Waiting for Colors

FACTORY PRIMED RED CEDAR SHAKES WITH A CHOICE OF TWENTY GORGEOUS

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Get the full details of this practical, economical plan for greater sidewall beauty NOW!

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Gentlemen:

Please send me at once full information on the Creo-Dipt Optional Kolor Plan for greater sidewall beauty.

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Which of these WATER PROBLEMS are you facing today?

— in concrete walls and floors below grade (AS-1)?

•

— in block walls and concrete floors below grade on exterior surfaces (AS-3)?

•

— in masonry block walls below grade on interior surfaces (AS-4)?

•

— in brick ana stone mortar (AS-5)?

— in concrete floors for industrial use (AS-2)?

•

— in all exterior stucco finishes (AS-6)?

•

— in masonry paint on masonry surfaces (AS-7)?

•

— in restoring existing concrete (AS-8)?

We invite you to write for Specification Data Sheets designed to meet any or all of the above conditions. We offer products and methods which have effected quick, economical and lasting results—on many different types of applications—over a period of years. (Obviously, we do not guarantee results—site unseen.) . . . Let us send you—without obligation—as many of these Specification Data Sheets as apply to your current problems. If they prove interesting, we invite the opportunity to present applicable case histories and to work with you on your current problems.

NOVA SALES Co TRENTON 3, N. J.

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A wholly owned subsidiary of Homasote Company—manufacturers of the oldest and strongest insulating building board; wood-textured and striated panels; ⅝" underlayment for ⅛" linoleum and wall-to-wall carpeting.

Another group of **NOVASCO PRODUCTS**

NOVA SALES CO., Trenton 3, N. J., Dept. 99

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☐ AS-5 ☐ AS-6 ☐ AS-7 ☐ AS-8

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Ceramic Glazed Asbestos-Cement Siding

There's sales magic in Ceramo, the ceramic-glazed asbestos-cement siding with a *whiter* non-porous surface that resists dirt, stains, grime . . . is easy to clean. Ceramo saves on repair bills, too. Won't burn or rot. It's the ideal material for new homes or re-siding jobs!

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CAREY SOTE

Extra-Flexible Asbestos-Cement Wallboard

For use indoors or out. Contains up to three times as much asbestos fiber as other wallboards—for *extra* toughness, durability, flexibility. Easy to "work." Comes in big 4′ x 4′ or 4′ x 8′ sheets that saw and nail like wood. Resists fire, rot, rodents, termites. Your carpenters swear by it—and depend on it for best results.

Carey PRODUCTS — CERTIFIED FIRE-SAFE

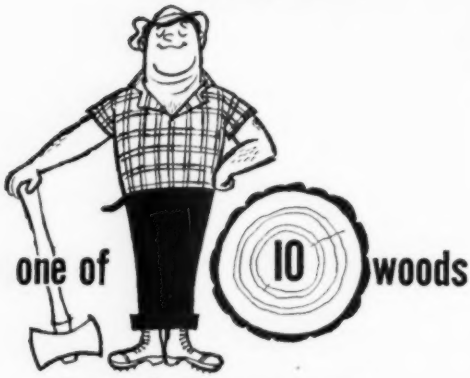
FROM THE HOUSE OF CAREY—

Fire-Chex Asbestos-Plastic Shingles • Fire-Guard Rock Wool Insulation • Bathroom Cabinets and Accessories • Ceramo • Careysote • Kitchen and Attic Ventilating Fans • Other Famous Products for Home, Farm and Industry

The Philip Carey Mfg. Company, Lockland, Cincinnati 15, Ohio
In Canada: The Philip Carey Co., Ltd., 277 Duke St., Montreal 3, P.Q.

Ask your Carey Dealer to show you samples of wonder-working *Ceramo* and *Careysote* . . . get *all* the facts on this profit-making pair!

ENGELMANN SPRUCE



from the WESTERN PINE REGION

Because of its light weight, pale color, even grain and small tight knots, this softwood has a particularly wide range of uses, from rough construction to interior finish and fine cabinetwork. Easy to work, nails without splitting, and holds nails and glue firmly.

This is but one of ten fine softwoods from member mills of the Western Pine Association. All are manufactured, seasoned and graded to exacting Association standards. Lumber dealers, builders, architects and wood users have found them dependable and best for many construction uses.

THESE ARE THE WESTERN PINES

IDAHO WHITE PINE
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THESE ARE THE ASSOCIATED WOODS

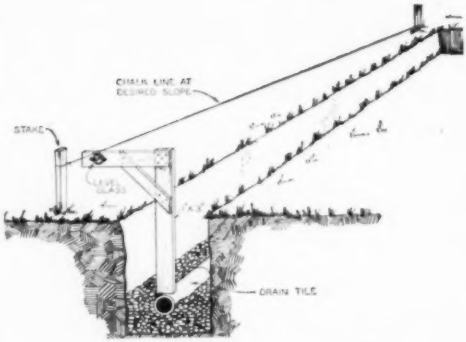
LARCH • DOUGLAS FIR
WHITE FIR • ENGELMANN SPRUCE
INCENSE CEDAR • RED CEDAR
LODGEPOLE PINE

THE WESTERN PINE REGION

Write for free illustrated Facts Folder about Engelmann Spruce. Address: Western Pine Association, Yeon Building, Portland 4, Oregon.

How would YOU do it?

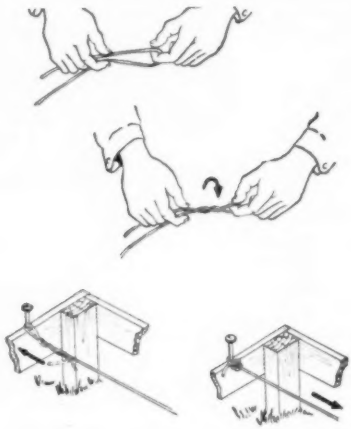
Ideas for the man on the job



Template Used in Laying Drain Tile

In laying drain tile for septic tank fields, set stakes at both ends and at sides of ditch. Secure a line to the stakes, which is set at the desired slope for the drain tile.

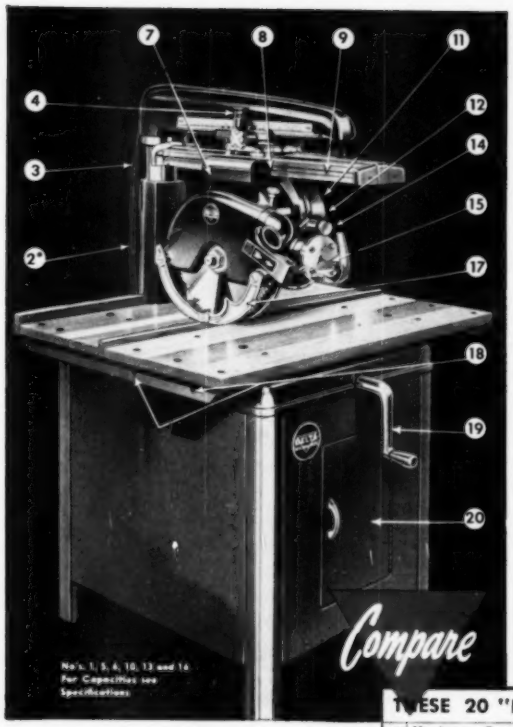
Use a template as shown above to lay tile at the proper pitch by holding the template under the line and on top of drain tile.—John Menkveld, Grand Rapids, Mich.



How to Make a Quick Knot

Proceed in the following manner when laying out a building and securing lines to batter boards:

Drive a nail at the desired line location, stretch the line tight, lap it back on itself about six inches, then with the finger of the left hand in the loop so formed give about four turns with the left hand while holding line in the right, thus forming a twist. Slip the loop over the nail in question, pull line as taut as desired, then reverse pull on loose end and line is thus automatically locked around a single nail.—Howard Lemaster, Pen Mar, Pa.



These 20 "Perfect" Saw Features

OFFERED BY THE DELTA 40-B

ARE UNMATCHED BY ANY OTHER RADIAL SAW

ONLY DELTA PROVIDES ALL TWENTY

	THESE 20 "PERFECT" FEATURES	New Delta 2 HP DD*		Saw "B" Solid Arm 2 HP DD*		Saw "C" Sliding Arm 2 HP DD*	
1	Maximum; Cut-off 16"—Rip to Center 48" Panel	Yes	√	Yes	√	Yes	√
2	Locks, Levers, Scales, Controls up Front	Yes	√	No		No	
3	Inter-locking Safety Plug Disconnects Power Line	Yes	√	†		†	
4	Quick-Set Miter Stops 30°—45°—60°	Yes	√	Only 45°		Only 45°	
5	Range Full Miter Capacity 0 to 90° RIGHT	Yes	√	No		No	
6	Range Full Miter Capacity 0 to 90° LEFT	Yes	√	No		No	
7	Grease Shielded Ball Bearing Carriage	Yes	√	Yes	√	Yes	√
8	Track Wipers Keep Trackways Clean	Yes	√	No		Yes	√
9	Adjustable Nitralloy Lifetime Trackways	Yes	√	No		No	
10	Saw-arm Swings Full 360° Above Work Table	Yes	√	No		No	
11	Motor has "Built-in" 115 to 230 Voltage Changer	Yes	√	Yes	√	Yes	√
12	Voltage Relay Start, 1 Phase Totally Enclosed Motor	Yes	√	Yes	√	No	
13	Motor Tilts 360° Inside Yoke	Yes	√	No		Yes	√
14	Quick-Set Bevel Stops 30°—45°—60°—90°	Yes	√	Only 45—90°		Only 45—90°	
15	Finger-Tip "Start-Stop" Motor Switch	Yes	√	No		Yes	√
16	Full Cut-off Capacity at Any Angle 0 to 90°	Yes	√	No		No	
17	Safety Guard Fully Encloses Saw Blade	Yes	√	†		†	
18	Means Provided to Attach Extension Tables	Yes	√	Yes	√	Yes	√
19	Column Elevating Handle at Front	Yes	√	†		Yes	√
20	Big 9 cu. ft. Tool Storage Cabinet Base	Yes	√	†		†	
		20 Yes		5 Yes		8 Yes	

*DD—Direct Drive Motor
†Optional at extra cost

Compare this Delta 40-B saw with other radial saws before you buy—a cold-blooded, point-for-point comparison of features, of what you get for what you pay.

Remember, there are no "extra charges" for the 20 outstanding features offered by this saw. Everything is included in one price!

While you are comparing features, compare the benefits they deliver—

- **a much wider range of saw uses**
- **easier material handling**
- **greatly increased safety**
- **faster set-ups, easier-to-reach controls**
- **space-saving compactness**
- **low upkeep and long life**

The Delta 40-B Radial Saw is furnished as a cabinet model for in-the-shop pre-cutting—and as a portable machine for on-the-job mass production operations. Ask your Delta Dealer to show you how its exclusive features will cut your building costs. He's listed in your Classified Phone Directory under "Tools."

Send this coupon for a free copy of the helpful new Delta Radial Saw Cost-cutting Idea Book, and cost comparison data between this and other radial saws.

There's a Delta Power Tool for Every Job-
WOOD OR METAL WORKING

53 MACHINES • 246 MODELS • MORE THAN 1300 ACCESSORIES

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☐ Please send the new Delta Idea Book
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Name _____ Position _____
Company _____
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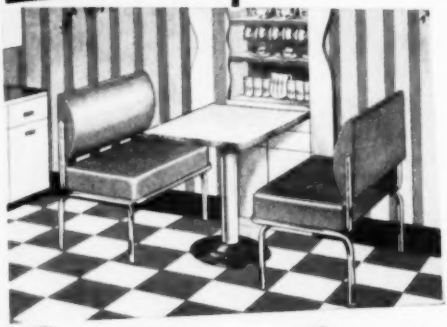
NEW! | beautiful practical



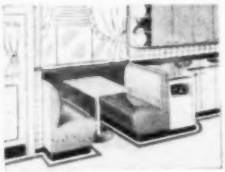
Breakfast Nooks

Ready Built by

BIANCO

for easy installation

Breakfast Nooks, built by Bianco for quick installation, are now available in a variety of styles. Prices often cost no more than the tiling work you save.



The extra smartness, utility and value provides extra eye appeal and extra sales appeal to the house.

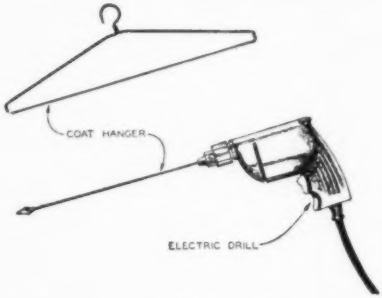
Cleverly designed, ruggedly constructed, upholstered in Duron in colors to match your kitchen's decor. Four seat nooks can be installed in spaces as compact as 5½′ x 3½′. They make the average kitchen look larger.

Write for information. Let us submit plans and costs for a Bianco Breakfast Nook without obligation. Simply mail us kitchen dimensions.

BIANCO MANUFACTURING CO. SAINT LOUIS, MISSOURI • 2736 VICTOR STREET •

How would YOU do it?

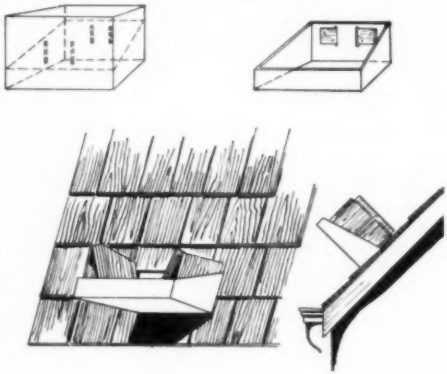
Ideas for the man on the job



Drill Bit Improvised from Coat Hanger

While builder was making exploratory holes in a frame house to lay out a heating plant for baseboard radiation, a 3/16 drill bit with an extension welded on was used for stud partitions, etc., but was found to be too short to go through floors and ceilings.

He used a steel wire fashioned from a coat hanger as a feeler to learn the position of studs, joists, etc., between plaster. He then flattened the end of the steel coat hanger, inserted it into the electric drill, and to his amazement found that it drilled the hole through the plaster, lath, base, etc., with ease. Results were a minimum of marred places or a nice pilot hole if it proved desirable to run pipes in that location.—Howard Lemaster, Pen Mar, Pa.



How to Make a Shingle Holder

Stained shingles are now delivered to the building site in cardboard boxes. This method suggests obtaining additional benefit from the box and also to add speed to the application of the shingles on the roof.

Cut the box as shown in sketch above thus obtaining two holders from each box. Make two 4-inch slots on the high side of holder. Insert a narrow shingle shake into slot and tack shake to roof. Secure box to roof as shown in sketch.—O. Johnson, Spokane, Wash.

A leading feature of the complete modernization of the Park Lane Hotel, Toledo, Ohio, is the installation of Chambers Built-ins in Pullman-type kitchens.

IN-A-WALL Oven is heavily insulated—top, bottom, all sides—utilizing retained heat to "cook with the gas turned off." Its huge, family-size capacity accommodates up to 40 lbs. of roast. Beautifully finished in stainless steel, or stainless front with choice of seven beautiful kitchen decorator colors.

ON-A-TOP 4-burner cooking top can be placed on 27" base cabinet. Top and panels stainless steel. Quickly removable individual drip rings. 8"x27" stainless steel splasher is standard equipment. Drop-in 3-burner also available.

Chambers

COOKS WHILE THE COOK'S AWAY ®

Chambers BUILT-INS have inspired an entirely new concept in small kitchen design. They give architect and builder a new freedom and flexibility in planning kitchen installations, enable them to utilize previously wasted space, and provide work units that can also be used as decorative elements. Also, most leading makes of kitchen cabinets readily accommodate Chambers BUILT-INS. Small kitchens equipped with Chambers BUILT-INS enhance the small home's salability and satisfaction.

Architect, Builder, and Homeowner bet on an all-'round winner, when planning and installing Chambers BUILT-INS. They are accepted by FHA for underwriting loans. They have been selected for Good Design by the Museum of Modern Art. They meet the rigid requirements of the American Gas Association for this type of installation.

The Chambers IN-A-WALL Oven stretches a housewife's budget by its many economies, since it *"cooks with the gas turned off."* It is the finest in AUTOMATIC *waist-hi* gas cooking. It can be fitted into 24 inches of the most convenient wall space, and, because of its complete triple-wall insulation, be surrounded on all sides by wood or metal construction. Similarly, Chambers three-burner and four-burner cooking tops fit easily into or atop counters or cabinets.

Selected GOOD DESIGN by the Museum of Modern Art — 25 YEARS

25 Year Guarantee on burners and cast oven bottom

Originator and Master Builder of Insulated Ranges since 1910

Send for A.I.A. Specification Sheet NOW!

CHAMBERS CORP.
DEPT. ART-252
SHELBYVILLE, IND.

Gentlemen:
Please send me A.I.A. Specification Sheet and other material describing the new Chambers Built-in GAS Cooking Units.

NAME _____

I AM AN ARCHITECT ☐ BUILDER-CONTRACTOR ☐ DEALER ☐

FIRM NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

10 MINUTES OR LESS!

Yes, only ten minutes or less are required to install a BILCO DOOR when you are ready to pour the capping or sidewalls. BILCOS also save countless man-hours during construction by giving free access to the basement.

And remember the advantages to your customer! Only BILCO CELLADOORS give the real basement efficiency that Homeowners want.

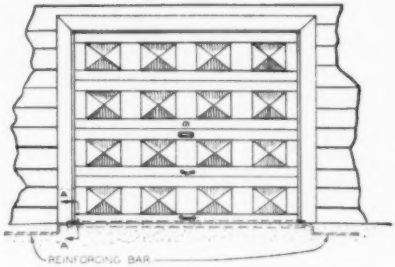
It's a lifetime investment—economical, trouble-free, burglar and fire-proof.

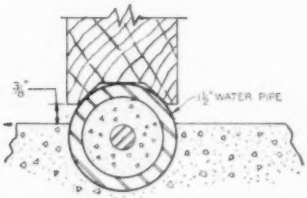
Write to The Bilco Co., 118 Hallock Ave., New Haven, Conn., for construction facts and the name of your nearest dealer.

Bilco®
CELLADOORS

How would YOU do it?

Ideas for the man on the job

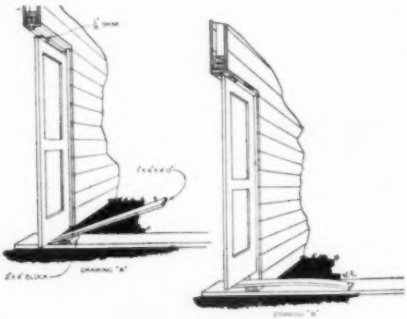




SECTION "A"-"A"

How to Make a Garage Door Threshold

When pouring the concrete for a garage floor slab, imbed a length of 1½-inch galvanized iron water pipe across the width of the garage door opening to act as threshold. This pipe is to project about ¾ inches above the finished floor line. A length of bent reinforcing bar is placed in each end of pipe with the opposite end of bars imbedded in concrete. The bottom of the door is undercut so the door will fit over the pipe. Care should be exercised to see that door fits directly over the threshold in order to make a snug fit.—L. Ed. Bailey, Kirksville, Mo.



How to Hang a Heavy Door

Here's how to hang a heavy door before the concrete floor is poured. Slide a plank under door space and then use a 1x4-inch pry over a 2x4 inch block. Start a nail as shown and step on lever and drive nail home. This holds door firmly in place for scribing, etc.—John G. Caldwell, San Mateo, Calif.

Bradley Floor Jobs . . . .

Get You More Jobs

Spontaneous enthusiasm for each new Bradley floor sparks the question, "Whose flooring and who laid it?"

When you answer, "Bradley's . . . and we did," you start a chain reaction of succeeding jobs that build sustained demand for your service.

Just one more reason why Bradley Oak Flooring is *first choice* of a steadily increasing number of floor contractors and layers who insist on the best in hardwood flooring, and match it with skilled workmanship.

Bradley promotes your contracts and reputation with two supreme oak flooring products: Unit Wood Blocks* and Straight-line Strip*—each available in standard sizes and grades, prefinished** or unfinished.

For complete data and specifications, see Sweet's 1952 Architectural or Builders Catalogs, or ask

*Also available in Beech and Pecan. Ask for Block Installation Manual. Another Bradley product is Random Width Oak Plank prefinished or unfinished.

**Bradley's penetrating seal finish and heavily bodied wax provide a factory finish of unrivalled beauty and wear.

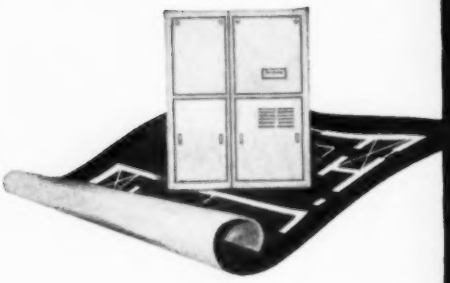
BRADLEY

BRADLEY BRAND

LUMBER COMPANY *of Arkansas* • WARREN, ARKANSAS

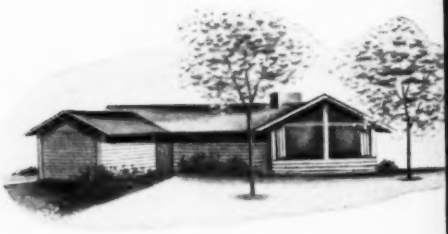
How would you do it?

If you were commissioned to design a house around air conditioning, would the air conditioning affect your design?



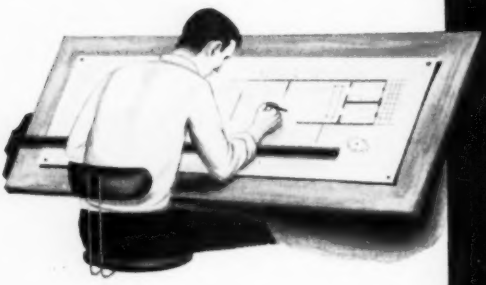
We think it would

We've seen air conditioning at work before. We've seen it revolutionize the textile industry, we've seen it redesign skyscrapers. That's why, when we developed the new Carrier Weathermaker Air Conditioner for homes, we thought of it in terms of a new kind of home . . . a Weathermaker Home.



We asked around

We asked architects . . . and we asked builders. And they told us that a Weathermaker Home could be more compact, that it wouldn't need to use its windows for ventilation, that it would be simple to orientate. They told us that it might cost no more than a conventional home. And that it could be a much better home.



What do you think?

What do you think? How would you design a Weathermaker Home? Would it be all-glass or no-glass? Would it take its cue from the compass or blithely ignore the compass to face a view? We'd be glad to send you a book we've had written on the idea – and the facts on the Weathermaker Air Conditioner.

CARRIER CORPORATION
314 S. Geddes Street, Syracuse 1, N. Y.

Please send me "How to Have a Carrier Weathermaker Home."

Name _____

Street _____

City _____ *State* _____

Carrier

AIR CONDITIONING • REFRIGERATION

SCHLAGE® CYLINDRICAL LOCKS...Time-Proven

In 15 years, no replacements...no repairs to SCHLAGE LOCKS installed at Western Merchandise Mart, San Francisco

Few buildings give locks heavier use than this "billion dollar market center of the West."

The 1100 Schlage Cylindrical Locks at the Western Merchandise Mart began their record of trouble-free service in 1937. Ten years later a wing was added and 700 more Schlage Locks were installed. "We specified them on the strength of Schlage's performance in our main structure," says "The Mart's" President, Frank K. Runyon. "And we have not had to replace or repair a single lock."

SCHLAGE DOORKNOB DESIGN

SCHLAGE®

THE Time-Proven CYLINDRICAL LOCK

SCHLAGE LOCK COMPANY, [illegible]

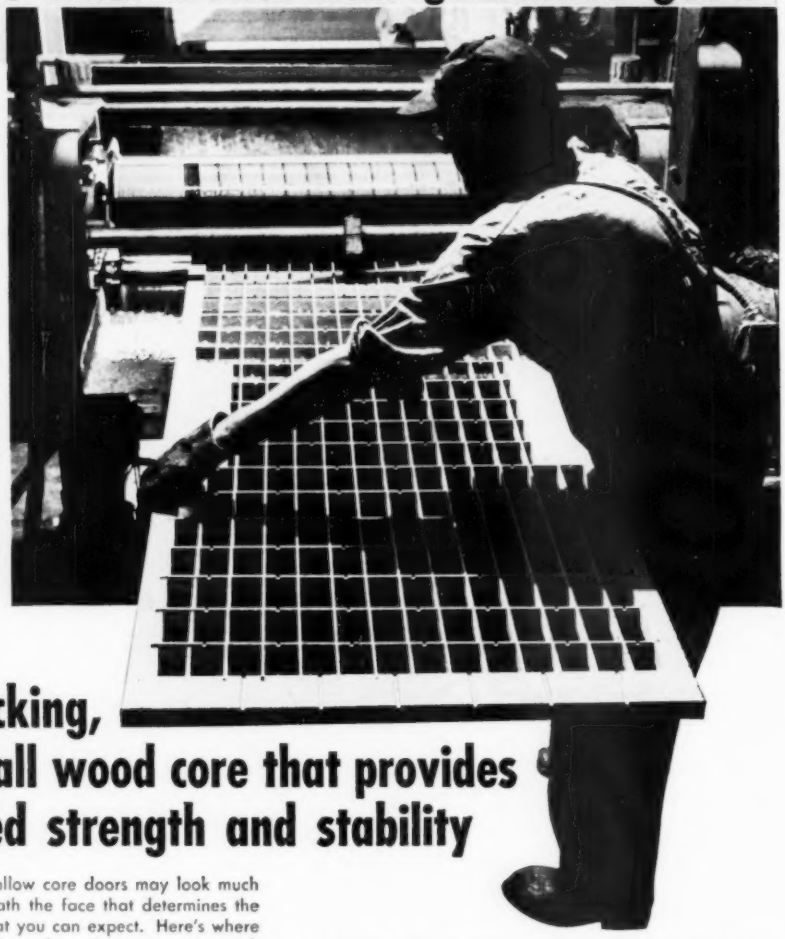
SCHLAGE LOCK COMPANY OF CANADA, LTD. [illegible]

PAINE REZO DOORS

T. M. REGISTERED

are *Unconditionally Guaranteed*

and here's what makes that guarantee good



the interlocking, ventilated all wood core that provides unduplicated strength and stability

On the surface, flush hollow core doors may look much alike, but it's what's beneath the face that determines the service and satisfaction that you can expect. Here's where the superiority of Paine Rezo doors is most pronounced; for nowhere else will you find equal dimensional stability, nor such lightness in weight combined with great structural strength.

For these reasons architects and contractors everywhere have installed more than four million Paine Rezo doors in buildings of every type. No other hollow core door has been so widely endorsed, so thoroughly time-proved. Remember, when you specify Paine Rezo doors your satisfaction, now and in the future, is *unconditionally guaranteed.*

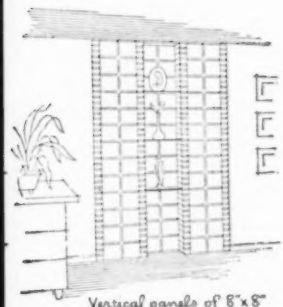
See SWEET'S catalog — or write for an illustrated data bulletin.

Manufactured by the

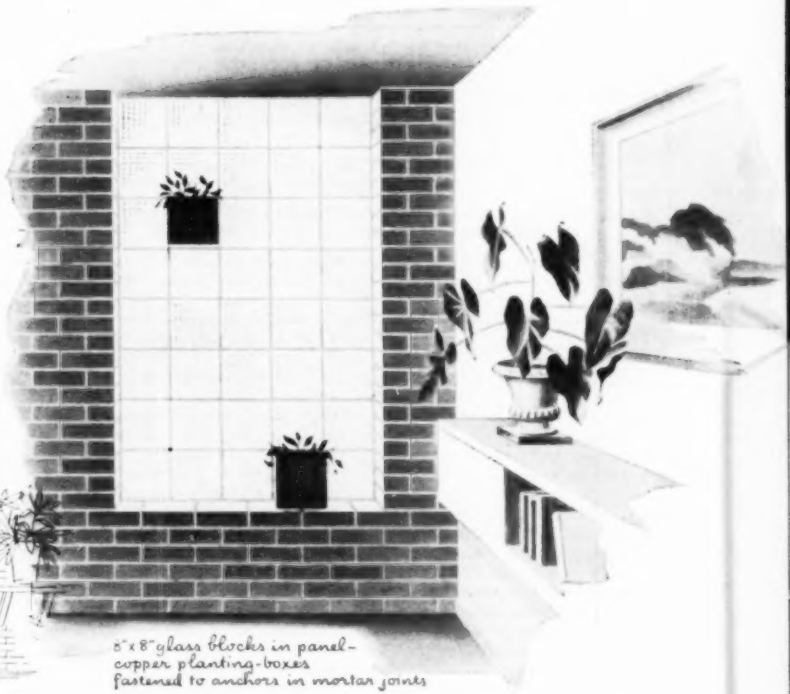
PAINE LUMBER CO., LTD. *Oshkosh Wisconsin*

ESTABLISHED 1853

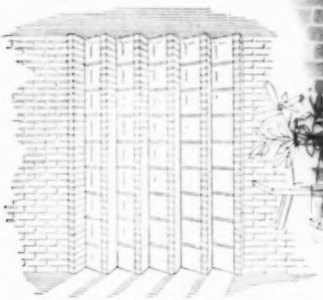
... from the INSULUX sketch book



Vertical panels of 8"x8" glass block-staggered in plan with brick vertical "fins" between. 1/4" plate glass shelves set in brick joints.



8"x8" glass blocks in panel-copper planting-boxes fastened to anchors in mortar joints



"Directing Light"-Interior Partition 12"x12" glass block set at an angle with single brick "fin" separators between each row.

STAIR HALL
three 12" blocks with individual frames

Dining Room
12" glass blocks worked in with the inside of a face brick wall interior

include light...include privacy...include INSULUX

Insulux Glass Block® offers you opportunities to create new architectural designs that cannot be achieved with any other material.

Write to Insulux, Dept. AB-2, Box 1035, Toledo 1, Ohio, for specifications using Insulux in these or other designs.

INSULUX
GLASS BLOCK

INSULUX GLASS BLOCK

A product of the Owens-Illinois Glass Company

"Ask The Experts"—

Got a problem you haven't solved? Can't solve? Haven't the time to solve?

Have you solved a problem with an answer you aren't sure of?

Are you doing some particular job—big or little—in a way that you think might be improved?

Then "ASK THE EXPERTS"—a group of industry authorities—experts in their fields. They'll give you the answer.

Address your questions to: "Ask The Experts," *American Builder*, 79 West Monroe St., Chicago 3, Ill.

As many questions and answers as space permits will be published monthly in *American Builder*, under the head—"Ask The Experts."

Addition of Hydrated Lime

A hearty welcome to your new feature, "Ask the Experts"—an indispensable service by a great magazine.

Can you tell me the pro and con on the addition of hydrated lime to a prepared (patented) mortar cement? Our contractor claims this is standard practice. If so, why isn't it recommended by the manufacturers?

I would also appreciate information on where to obtain pertinent data on concrete and masonry construction in below freezing weather.

E. T. L., Negaunee, Mich.

The question on the addition of hydrated lime to a prepared mortar cement is not recommended. This is because the mortars have been thoroughly tested by the manufacturer and are designed to provide a specific strength. Manufacturers do not recommend the addition of the hydrated lime because such tampering with the material would reduce the strength and effectiveness of the mortar.

J. N. Bell,
Portland Cement Association

A comprehensive article on building in winter appeared on page 162, October 1951 issue of the *American Builder*. — The Editor.

Reduce Chimney Noise

I am writing to ask if you can suggest anything to reduce chimney noise. I built a new house about a year ago, which is in a rather high location, with no trees of any size near to break the wind, and on windy days a loud howl or whistle comes down through the fireplace.

The only suggestion I have had from architects and others I have consulted is that an old fashioned chimney pot with side openings, such as were sometimes used on English style houses, might help reduce the noise. I am afraid this might be too high to look well on the house, which is a story-and-a-half, red brick, colonial. Also, I have been unable to get one.

At present the flue tile projects three or four inches above the top of the brickwork.

F. L. W., Rockford, Ill.

You pose a rather difficult question here. The very fact that you inquired from an architect and others to obtain an answer caused us to get in touch with men who construct, repair, and correct defects in chimneys. The closest approach that we came to the solution of the problem was offered by the Swartwout Co., manufacturers of roof ventilators.

They recommend that a rotary, ball bearing ventilator with a weather vane be installed on top of the present chimney cap.

Architecturally speaking this might not be the answer. However, a sheet metal man might use the principle and build a unit that would fit inside the flue. Just the weather vane portion need extend above the flue lining. This would control the direction of the wind and control the noises which occur.

Condensation Problems

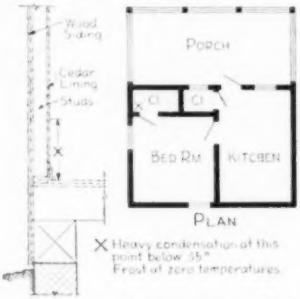
Perhaps your column could be of help to me in locating the cause of heavy condensation in a clothes closet as per drawing enclosed.

Also, I have installed storm sash throughout the entire flat, yet, condensation appears heavily at times both on the sash as well as the storm windows.

Please advise either through your column or by return mail as I am anxious to overcome this difficulty because new woodwork and floors have been installed and now the woodwork as well as the floor has been stained and is getting darker.

S. C., Chicago, Ill.

Your condensation problem in a clothes closet is a rather difficult one to answer without all the facts. It would appear that several answers might be possible. The outside wall



might be devoid of insulation. High humidity might occur in the basement at this point, possibly from a heating plant or laundry activity. The closet door, kept closed, will create a lower temperature within the closet. Warm air entering from adjacent rooms when the door is opened could cause condensation.

Condensation forming on the storm sash and the windows in extremely cold weather is not uncommon. This is due in part to the fact that cold penetrates through the storm sash to contact the warm window on the inside. Cracks or loose fitting storm and sash units could be responsible.

Brick Veneer Leakage

I have built a brick veneer house and water gets through when it rains. The mortar joints are solid. Somehow when it rains, it leaks. Can you tell me of some waterproofing that will stop it. One that is clear and won't color the brick?

C. S., Kalona, Iowa

With the limited information that you set forth it can be assumed that your difficulty may not be in the brick. If, as you say, the mortar joints are solid, then it would be almost impossible for the rain to filter into the wall unless through some opening, possibly adjoining the wood trim or some such area.

It is suggested that you thoroughly examine the walls of the house again with this thought in mind, and possibly you may find your trouble is other than in the actual brick work. If so, it should not be a difficult matter to seal up these leaks.

Information on Log Houses

We have been getting the American Builder for some time now; we like it and find many helpful things. So far we have not seen anything on log houses. We want to build a 3-bedroom log house and would like to have some information concerning their construction.

Mrs. M. D., Grand Junction, Colo.

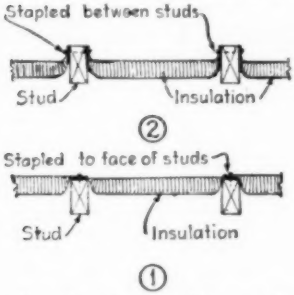
This is a special type of building and the construction methods are not well known. We suggest that you write to Glacier National Park, Glacier, Mont., or to Yellowstone National Park, Cody, Wyo. These two park organizations build many of these houses or cabins. They should have blueprints available showing the construction methods.

Information can also be had in book form—Building a Log Cabin by W. Ben Hunt. Published by the Bruce Publishing Co., Milwaukee, Wis.

Which is Correct

Below are two diagrams of applying insulation on the outside walls of a studded building. Can you tell me which is the correct method?

J. P. C., Silver Creek, N. Y.

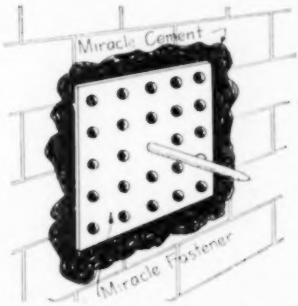


You show two graphic examples of fastening blanket insulation to the side walls. Both these methods are correct. In connection with method (1) the flange is nailed to the face of the stud wall when the insulation is four inches thick, and where it occupies the entire area between the studs. Illustration (2) would be the method when 2-inch insulation is placed in the center of the stud area leaving an air space on either side. Flanges are nailed to the sides of the studs.

Fastening Furring Strips

What is the best thing on the market for fastening furring strips to masonry walls.

E. H. K., Coin, Iowa



Next to cut nails, Miracle Anchor Adhesive is finding favor among builders for fastening furring strips to masonry walls. This type of anchor can be obtained at most local lumber yards.

Cost of Construction

What do you figure the cost per square foot on frame and plaster or brick veneer and plaster, both types, modern, in your locality.

A. K. F., Somerset, Ky.

Cost per square foot on a frame and plaster dwelling in the Chicago area would be approximately $12 or $13. A brick veneer and plaster house would cost approximately $14 a square foot.

Gable Sections

I wonder if you could publish in your magazine, if space permits, a section drawing showing the proper method of framing the gable section of the modern house with flush gables, which is quite the style today. They often have a two inch jog at the ceiling line. The exterior is finished in plywood or knotty pine.

There are numerous sketches of the eaves in section but never the gables. Yours for a wonderful builder's magazine.

R. J., Powell River, B.C. Canada

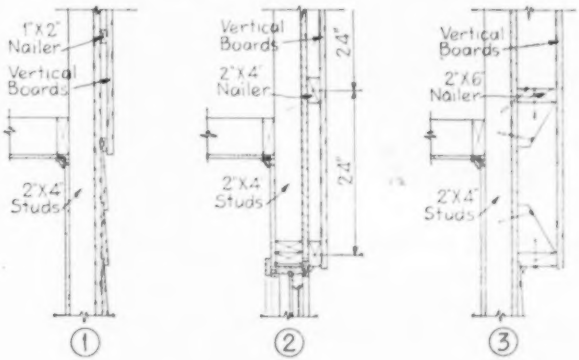
It is true that we don't usually print the gable section. However we hope these sections will help you. The illustrations that you included as examples were prefabricated houses.

The drawings shown below illustrate three different methods of constructing the gable end. Note that in each case the change in thickness of wall section, which varies from one to six inches greater than the area below, occurs directly over the head of the windows.

No. 1 shows 1x2 nailers secured directly to face of sheathing for nailing of vertical surface boards in gable ends.

No. 2 shows 2x4 nailers secured to sheathing. Vertical boards or horizontal siding can be used for surfacing gable ends.

No. 3 shows 2x6 nailers secured to sheathing. Vertical or horizontal surfacing can be used. Note that the normal 2x4 wall studs extend through to roof line in each case.



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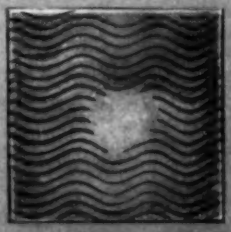

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RUBEROID REPORTER

NEWS OF INTEREST TO BUILDERS • PUBLISHED BY The RUBEROID Co., 500 FIFTH AVE., NEW YORK 18, N. Y. • NO. 2

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Stonewall asbestos-cement board is fireproof, rot-proof, rat-proof, rust-proof, termite-proof, strong, rigid, yet bendable enough to form Gothic roofs. The big gray 4 x 8 ft. sheets provide their own weather protection . . . never need paint. In spite of its rock-like durability, Stonewall is easy to work . . . takes nails and screws readily and goes up fast.

When it comes to durability, serviceability, workability and economy, Ruberoid Stonewall Board stacks up against any other material. Builders who have seen and used Stonewall come back for more . . . and more!

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While the uses for Stonewall Board are unlimited and it is always in great demand, the supply is plentiful. Where scarcities develop in other materials and where Stonewall is used and found superior you can satisfy your customers and fulfill your contracts with Ruberoid Stonewall Board.

No need to saw Stonewall Board. Try this faster way. Just score it and snap it off. It breaks clean. Takes nails and screws readily. This method is not only easy to use, but time-saving and economical, too.

Helpful Data

There is a supply of very useful Stonewall literature available to you . . . booklets on industrial uses, fabricating and handling methods, etc. Get samples now from your Ruberoid dealer.

Farm Building Plans

Ruberoid also offers a wide selection of farm building plans, developed in cooperation with the Better Farm Buildings Association, including bills of materials to help make it easier, faster and better to build with Ruberoid Stonewall Board.

Handling and Storing Tips

Ruberoid Stonewall Board is easy to handle, but its edges should be protected and appearance preserved by piling flat when being stored. Make sure there are no chips or debris between the sheets. Turn the top sheet of the pile, with the finished side down.

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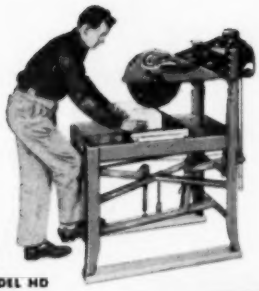

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③ MODEL HD "CONVERTIBLE" CART used for SAWING CONCRETE

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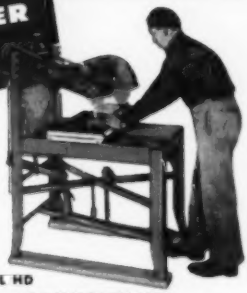
④ MODEL HD "CONVERTIBLE" CART used for TRACK SAWING



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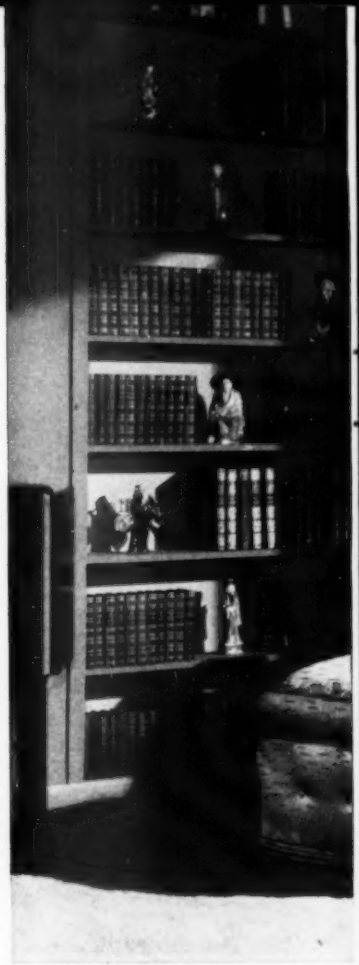

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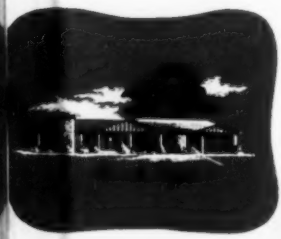

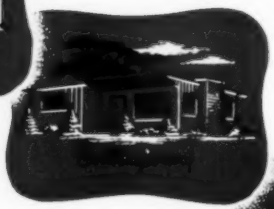

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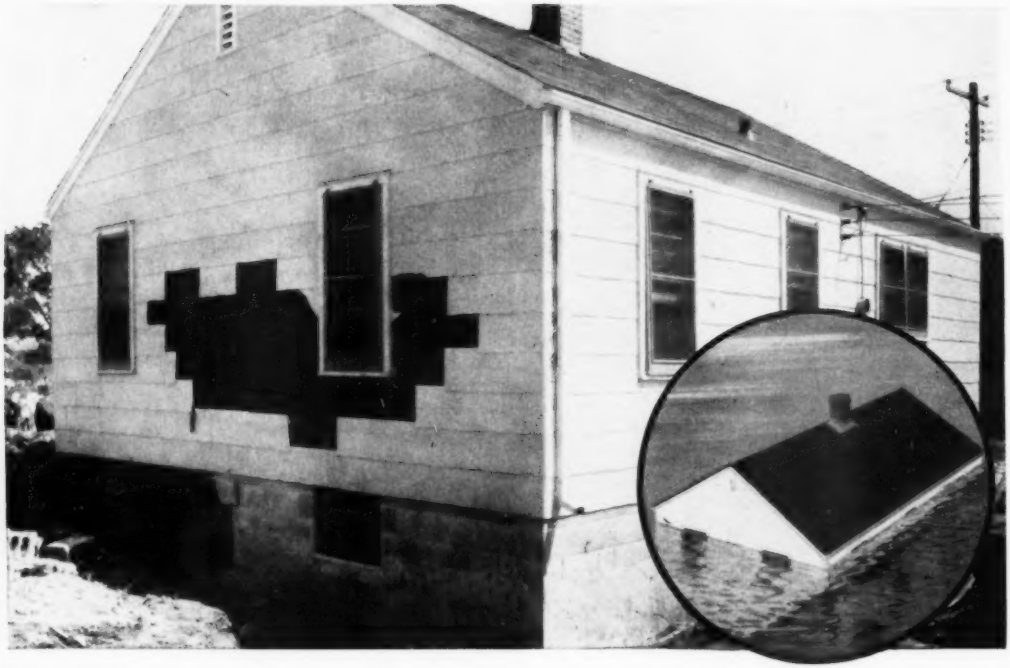

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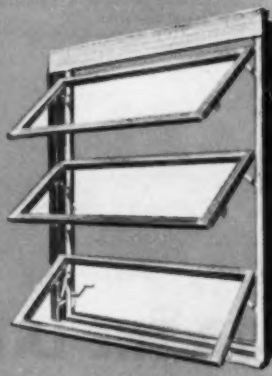

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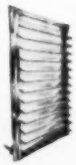

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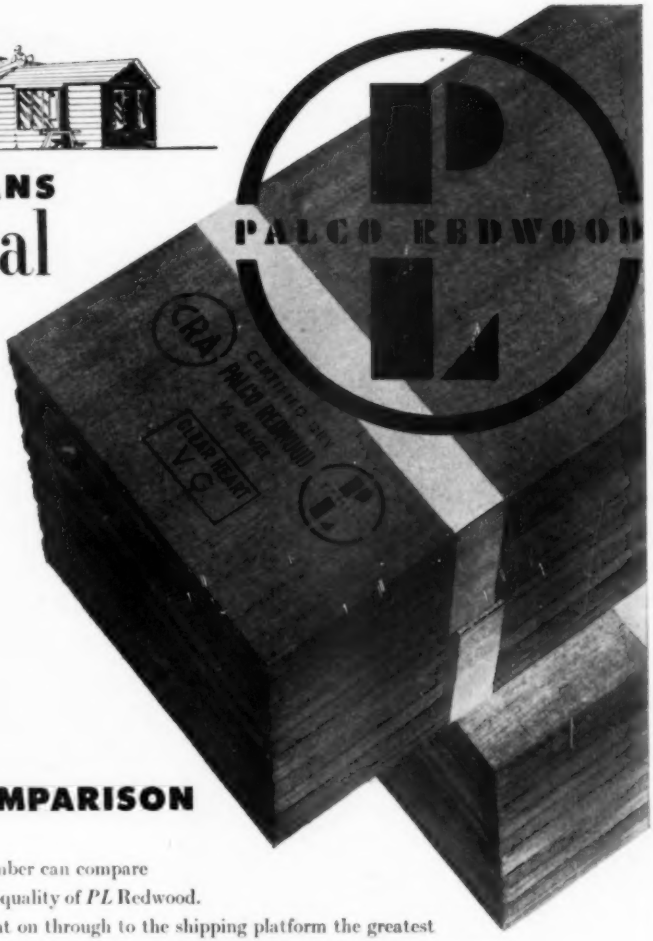

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THE MECHANIC CAN MAKE OR BREAK THE PAINT JOB

This fellow is applying the first coat. Is he using a primer of the same color or tint as the finish coating? . . . Is the primer the same brand as the finish material? . . . Is the surface dry to the touch? . . . Will the temperature keep above 40 degrees? . . . Is he spreading the paint at a prescribed rate—maybe 450 square feet per gallon for a 2-coat job, 600 square feet for a 3-coat job? . . . Has he sandpapered or planed any loose grain or splinters? . . . Before cleaning resin off the surface, did he treat the pitchy areas with a blowtorch to encourage bleeding of the resin? . . . Has he cleaned off all marks of oil, asphalt, or lumber-marking crayon? . . . Will he counter-sink nails with putty on trim, gables, and door jambs after the priming coat is dry? . . . Will he stop painting if a wind starts blowing dust over the surface, or if a fog rolls up? . . . Did he begin priming as soon as erection was completed? . . . On a winter job, will he stop at least two hours before sunset? . . . *If the answer is yes*, the paint job has nothing to fear from workmanship.

and the Building Business

First of a series of 8 articles which will set down basic facts about the paint problem as the builder must deal with it in construction

THE real estate experts say that a good paint job increases the value of a house by 12 per cent. They also say that the three principal influences which sell a house are (1) location, (2) style, and (3) beauty—or the care and good taste with which the house has been painted, inside and out. The sales power of modern colors used with zip and understanding to create "appeal," is a cornerstone of American merchandising.

So beauty definitely pays, and many builders of houses for sale take this lesson to heart, treating the painting phase of their operation with the care it rightly demands. This means painting with top grade materials, not only in carefully worked out color schemes but also with proper selection and handling of the paint on the specialized surfaces involved.

But these are difficult times costwise. Every effort is being made to keep prices down, and the squeeze is too often applied where it can least be tolerated—on the paint job. The fact is, of course, that there is no real economy in skimping on paint. Short-cutting on an exterior paint job is sheer extravagance. If cheap material is used, or wrong or careless methods indulged in, trouble soon sets in. In many a new house built today, especially in big projects, the paint is breaking down in as short a time as from six months to one year. Then begins a vicious cycle in which the dissatisfied buyer and the builder mill around trying to solve a problem which never should have arisen in the first place. Repainting on top of the faulty coat is rarely the answer. In the end, the only solution may very well be to burn off the original paint and start over—and this will cost around 50 per cent more than it would have cost to do the job right originally.

Last summer, experts from the Forest Products Laboratory got wind of wholesale paint failures in large FHA projects in two metropolitan areas in the midwest. They set out on an informal tour, observing at first hand what was going on. Poking around in paint storage rooms on the job, checking materials being used, they found not a single tradename paint in evidence, although specifications called for such materials. The paint merely carried a catalog number on the can, and who could say what was in it? The builder, snowed under with the myriad details of a big operation, certainly didn't know. Also, split use of products was common, the primer coat being of one kind and the finish coat of another. The painting contractor, sharply pressed by competitive bidding for the job, had made the mistake of bidding too low to allow for the use of quality materials.

This is a situation that can be duplicated in big cities all over the country. However, the painting contractor should not be singled out as solely responsible for paint performance. Back of him is the paint dealer who sold the material, doubtless without even asking what it was to be used for and how. And back of them both, after all, is the builder.

The painting contractor naturally has his side. When he is doing the best he can with a builder's "economy" specifications, he has to try to educate the builder and his salesmen not to give buyers the impression that they can have whatever they want in the way of decoration and colors. A smart contractor working conscientiously with houses in a large project will, for instance, send a letter to the buyer enclosing a color chart and stating what the painting specifications for the house are, as set by the builder. If the buyer wants something different, he can make a private deal with the contractor, at extra cost. This is obviously good public relations and contributes constructively to an honest approach to the paint problem.

As for the paint manufacturers, agreement seems to be general among painters and builders that the manufacturers are doing a good job in research and development. The paint problem is generally seen to be basically a matter not of the product but of the many other factors touched on here. If you are careful to buy first-rate paint—either the well-known trade brands or unadvertised brands whose formulation is known and has stood the test of successful use in the neighborhood—you won't run into trouble from the material itself.

Three Vital Points

Final responsibility rests with the builder, whatever may happen along the way. The vital points in this responsibility are: (1) the paint selected, (2) proper application, and (3) careful attention to those constructional details which affect the paint job. Painting specifications are a "must," in spite of the experience outlined above (which is concerned with mass production conditions and not with the more individualized job). Too many contracts are verbal between builder and painter, allowing the painter too wide a latitude in the selection of material.

Ideally, the builder and/or his architect should know enough about paint to set firm and realistic specifications, then follow through with supervision. The dealer must not simply sit back and pass over the counter whatever the painter asks for, but must try to fit the product sold to the use intended. The painter

IN NEW ENGLAND, paint experience in a large project built in 1942-43 is revealing and typical of experience elsewhere. These photographs show characteristic houses and were taken by the Forest Products Laboratory in June 1951. (1) and (2) are representative of the condition of the paint on all houses originally painted white, cream, or gray. The paint began to fail within a year or so after each repainting. Other houses, such as (3), were initially painted with red iron oxide paint, were repainted only once (1947) and have always kept their paint in good condition. Four of the houses with the white-cream-gray paint were stripped of old paint in 1949 and repainted with pure white-lead paint; the new paint was still in excellent condition by October 1951. Careful examination showed that none of the houses was affected by cold-weather condensation. Nor was there evidence of more than normal penetration of storm water into the sidewalls. Paints of poor quality were primarily responsible. Although trade-brands of well-known makes were specified, no effort was made to discover what paints were actually being used by the painting contractors.

U. S. Forest Service, Forest Products Laboratory

National Paint, Varnish and Lacquer Association

WHAT HAPPENED? Disgruntled owner and worried painter try to cope with an unsightly paint failure. Somebody should have known about the condensation problem. If you use modern insulating materials but forget to provide proper "breathing" for the house and neglect to enclose the inner shell in a vapor barrier, water vapor from inside the house will condense behind the siding in cold weather and set up pressure which will push the paint off. Or maybe an exterior construction defect which admits moisture is at the root of the trouble. Paint problems can go deep into a builder's reputation.

must follow the manufacturer's instructions closely, and in spite of possibly unfavorable painting conditions, must be willing *not* to improvise with the materials. He must also try to sell the service he believes is necessary to do the job right, even though the builder is trying to effect supposed economies.

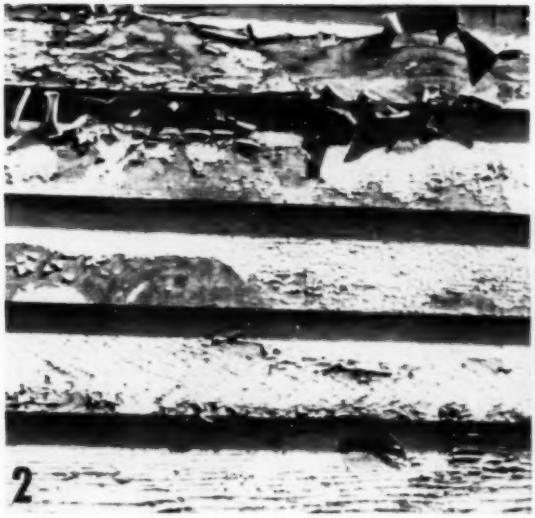
Thus, solving the paint problem in the building business is an equation in *not* following the line of least resistance—a tough assignment.

But there is another factor:

Workmanship

The skill or ignorance of the painting mechanic is central in this whole picture. You can give a good mechanic poor material and he will do wonders with it; but nothing can save good material in the hands of a poor mechanic. But where are the good mechanics in painting today? Painting trade leaders admit that the numbers of skilled men, adequately trained to work with the modern materials on all types of surfaces, are very low. Trade-ignorance is widespread. "I could do it better myself" is a nation-wide complaint, and the trend of manufacturers to develop paints for use by the amateur has not grown simply out of thin air.

There is a new awareness among painters that unless something is done, the trade will fall into disrepute. That something is seen to be a greatly revived apprentice-training



2

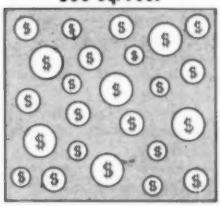
3

program on a national scale. For the life blood of the trade—the pool of apprentices—is drying up. Young men are not entering the trade, perhaps because too little has been done in the past to stimulate training programs. The industry now needs thousands of new apprentices trained in modern techniques. The average age of journeyman painters in New York City, for instance, is 59 years. In Chicago there are about 12,500 journeymen and about 160 apprentices in training—only a drop in the bucket; there should be at least 500 apprentices in training for this great area. The situation is serious and the builder obviously shares in it.

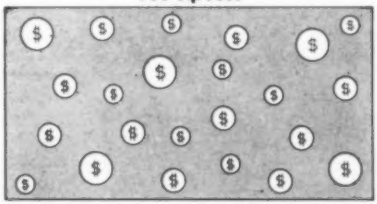
The painters take comfort in the fact that no matter how fool-proof a paint may be said to be by its maker, a good mechanic can still get better results with it than can the amateur. The answer of the beauty business to the threat of the home permanent-wave systems was better-trained operators. The answer is exactly the same for the painting trade, and a start has been made in the right direction in the apprentice-training programs that are springing up here and there in the nation's cities. But the balance is far from even, and this places a real responsibility on the builder. He needs to be aware of the nature of painting problems and should have considerable understanding of them. Above all, he must keep a sharp eye on the day by day work of the mechanics on the job.

The present trend among builders to turn the paint job over to a subcontractor understandably expresses the builder's feeling about all this. With all the other responsibilities which he must shoulder, how can he be a paint boss, too? Sixty-six per cent of a test group recently sampled by *American Builder* now sublet paint jobs as compared with 55 per cent previously. But it is always well to remember that a builder is no better than his subcontractors, and that farming out the paint problem is not necessarily its solution. Probably more sensible would be a partnership in responsibility between the builder and the paint manufacturer who offers a supervisory service as part of the purchase price of his paints for the job. The manufacturer's interest will be that of the builder—a paint job that performs successfully on a specific house, with all that specific house's individual peculiarities.

500 Sq. Feet



900 Sq. Feet



THIS IS WHAT HAPPENS when the well-meaning painter adds extra oil to a top-grade ready-mixed house paint:

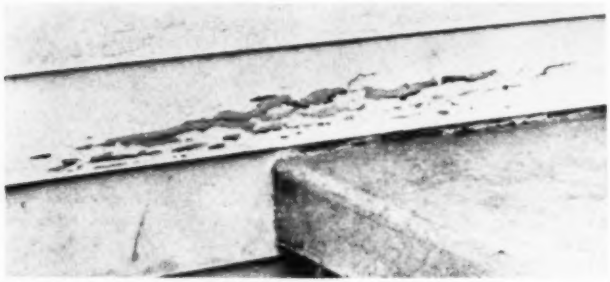
The manufacturer has spent many thousands of dollars to develop a formula which will make the paint look and act like the 500 square foot diagram above. The pigment particles are represented by coins of different sizes and values. Their distance from one another in the binder, or oil, is a matter of scientific control. The result is durable coverage of, say, 500 square feet of surface. Remember—it is the binder that disintegrates under weathering

The painter decides to add an extra quart of linseed oil to the finish coat. "I always do that. It makes a better job." But does it? Adding the extra oil spreads the paint over a larger area. But it pushes the particles of pigment farther apart, exposing more of the binder to the forces of weathering. A weaker coating is the result—and not only that. Since over dilution tends to cause excessive chalking in the end, dollars have been needlessly lost to the air.

—— *From an analogy by Maurice Van Loo, Sherwin-Williams*

POOR CARPENTRY plays havoc with paint. The split clapboard at center of picture has absorbed water from the shingle roof, causing damage both to the board and the otherwise satisfactory paint job. Other boards above and below this one have been cut so that they touch the wet roof, and are beginning to show signs of paint damage. The board just above the split board has been cut so short that it can dry out, and so retains its paint. All of these clapboards should have been cut slightly shorter, their ends primed with paint, and adequate flashing installed originally at the junction of roof and siding.

Photos courtesy National Paint, Varnish and Lacquer Association



MANY CONSTRUCTION points have a bearing on paint performance and will be discussed in detail in chapter 6 of this series. Here is one example: above a concrete porch floor, peeling and cracking paint can be prevented by filling the space between the slab and the siding with a good caulking compound. Water can travel a long way through the grain of wood before causing the paint to blister

The Big Problem is Time

It is obvious that the average operative builder's big problem is time. Usually he is a one- or two-man operation at the executive level, handling everything—finance, permits, contract details often involving as many as 19 trades. He knows a little about everything connected with this highly complex operation. Then he becomes a salesman of the houses he produces. All this involves more time than he has to command. He is able to read only in snatches, if at all, and cannot hope to keep adequately abreast of the latest developments affecting each of the many sides of his business. When it comes to paint he feels a natural frustration. Can you make pine look like birch? What is the proper coating for basement walls? How soon should brickwork be painted? Questions like these are usually beyond him. The paint salesman simply confuses him with talk of cutting costs, so that the builder may find himself building his house down to a price instead of building it up—with the help of a stunning paint job—to the value (and price) that is inherently in it.

This series of articles is dedicated to the conclusion that although the builder doesn't have time for it, nevertheless he cannot afford to lose control over the paint job by passing it along. There is a body of basic knowledge about paint which can easily be acquired and which can be used as a guide in making right judgments in planning and carrying through the paint job. These articles, which will appear monthly through September, propose to present this information in an organized way.

Next month —
WHAT PAINT IS

	The Paint Series will run monthly, in these chapters . . . . . .
March	WHAT PAINT IS
April	KINDS OF COATINGS AND THEIR NATURE
May	PAINTING EXTERIORS
June	PAINTING INTERIORS
July	CONTROLLING PAINT FAILURE
August	THE WORLD OF COLOR
September	PAINT BRINGS OUT THE BEST POINTS

ALTHOUGH GYPSUM PLASTER has been in use many centuries, lightweight aggregate is a relatively new component

Lightweight Plaster Aggregates

What They Are . . . How to Use to Achieve Savings

VERMICULITE and perlite are the best known and most commonly used of the lightweight aggregates. Vermiculite is a mica-mineral, which, when heated, expands or exfoliates to about ten times its original size. In this form it has the appearance of an accordion under the microscope. Perlite, a volcanic rock, also expands to ten times its original size when heated. Both have been included in the ASTM Standard Specifications for Gypsum Plastering, A42.1—1950.

Care should be exercised in the selection of lightweight aggregates. The minimum density of 7½ pounds per cubic foot and the absence of excess fines in particle sizing should be mandatory. Lower densities should be avoided because it is a well known fact that compressive strength generally follows a direct relationship with density. It has been found that four- and five-pound aggregates sometimes provide only half of the expected compressive strength. Similarly, an excess of fines generally increases the consistency, which, broadly speaking, means water-plaster ratio, with the resultant lowering of compressive strength. Strict conformation to ASA A42.1 is important.

For proportioning of lightweight aggregates to plaster it should be remembered that one cubic foot replaces 100 pounds of sand in the normal plaster mix. Therefore, the scratch coat of plaster should consist of two cubic feet of lightweight aggregates per 100 pound bag of plaster, and the brown coat should consist of three cubic feet to 100 pounds of plaster. These lightweight aggregates are generally packaged with four cubic feet per container.

Lightweight aggregates are no more fire resistive than sand but their use in combination with gypsum plaster provides much greater fire resistance than sanded plaster. This phenomenon is due principally to the low coefficient of expansion of lightweight aggregates under extreme temperature as compared to a high coefficient of sand under similar conditions.

To obtain a fire resistive rating for partitions, two panels are constructed. One measuring 10 feet by 14 feet is submitted to the fire endurance test. The other 10 feet by 10 feet is submitted to half the fire endurance followed by application of the hose stream. When plastered with sand these partitions are bowed or bellied toward the fire and the distortion is as much as 9 inches, thus causing an early failure. Similar constructions plastered with lightweight aggregates and gypsum are distorted very little by the high temperature (1700°F. for one hour ratings) thus permitting the gypsum to remain in place and provide the resistance to the progress of heat through the construction.

Gypsum contains a substantial amount of water of crystallization (21 per cent by weight) and, when attacked by fire, the water of crystallization is slowly given up in the form of steam by a process known as calcination. As the heat continues, the place of calcination moves slowly into the gypsum, leaving behind it completely calcined gypsum. However, the temperature of the uncalcined gypsum cannot greatly exceed the boiling point of water until all the water of crystallization has been driven off. This is a slow process, a

SHOWN HERE is construction of gypsum lath-lightweight gypsum plaster fireproofing for fire tests conducted at the National Bureau of Standards. Lath is clipped to channels which are tie-wired to open joists: required thickness of plaster is then applied to lath

temperature of approximately 1700° F., for one hour duration would be required to calcine through a one inch thickness.

The coefficient of expansion of lightweight aggregates under high temperatures is low, as shown by the graph. Distortion of panels is materially reduced, which accounts for the higher fire resistive ratings for lightweight aggregates, which are generally 50 per cent greater than for sand.

Both vermiculite and perlite generally cost slightly more than their equivalent in sand for plastering, particularly where approved sand is available locally.

Generally the increase in aggregate cost does not exceed 10 per cent. However, the labor saved in the mixing and application, to say nothing of the cost of thawing sand in cold weather, generally compensates for the additional cost of the lightweight aggregates. Many plasterers will use aggregates in lieu of sand, these other factors balancing the cost.

Structural Comparisons Reveal Cost Savings with Lightweight Aggregates

Savings up to $4 per square foot can be realized in the cost of structural frame for a typical three-story, office-store building if the frame is constructed of light steel, fireproofed with gypsum lath and lightweight aggregate gypsum plaster.

Lloyd H. Yeager, general manager of the Gypsum Association, makes this announcement to the building trades, basing his contention on fire resistive ratings for gypsum lath-lightweight aggregate plaster fireproofing, compiled after three year's study, and cost analyses made by Holabird & Root & Burgee, nationally known architects.

Elaborating on the subject, Yeager declared: "Various tests over the last few years have demonstrated the importance of lightweight aggregates in gypsum plaster for fireproofing, but the resulting findings could not be correlated to provide complete design data for the architect and engineer.

"Realizing the need for scientific data on the subject, the Gypsum Association three years ago inaugurated a research program to develop practical systems for the most economical use of lightweight aggregates in the fire protection of light steel frame buildings. Tests were conducted at the National Bureau of Standards in Washington, after much basic information was gathered in laboratory study.

"For example," he added, "fourteen columns were tested to provide a variety of combinations of gypsum lath and lightweight aggregate gypsum plaster fireproofing for 1, 2, 3 and 4-hour fire-resistive ratings. Similarly, light steel floors have been tested for 1, 1½, 2 and 4-hour fire-resistance. Tests were run, also, on two-inch solid gypsum lath and plaster partitions in various combinations to provide data for 1, 1½ and 2-hour fire-resistive ratings. (The same construction, plastered on one side only, is used for exterior wall furring.)

"Official fire-resistive ratings are available on all the constructions described on these pages," Yeager said, adding, "light steel frame buildings now can be designed to meet any and all building code requirements for structural strength and fire protection."

He explained that after the Gypsum Association developed the fire ratings, the association commissioned Holabird & Root & Burgee to design and compare, cost-wise, a light steel frame construction, fireproofed with lightweight aggregate gypsum plaster, with a heavier steel frame, fireprotected with concrete, and a reinforced concrete frame. A hypothetical three-story, office-store building was used for the comparison.

BROWN COAT goes over scratch coat

TWO-COAT application: scratch coat omitted

PLASTER spray gun application

Descriptions of the structural frame systems for the hypothetical building studied follow:

1. A 4-inch concrete floor slab, steel beams, steel columns and concrete fireproofing, with bond plaster ceiling applied directly to the underside of the floor slab.

2. A 3-inch reinforced concrete slab, (pan construction) reinforced concrete columns and an attached metal lath and plaster ceiling.

3. A 2-inch concrete slab poured over light steel joists, steel beams and columns, all fireproofed with gypsum lath and lightweight aggregate plaster.

Identical requirements were observed in all respects in the three designs. A study of prominent building codes dictated at least a 2-hour fire resistive rating for the floors and a 3-hour fire protection for the columns.

The panel sizes selected were identical as to columns spacing and open spans, insofar as the center-to-center spacing of the structural framing members are concerned.

A live load of 100 pounds per square foot was assumed for the first floor and for corridors. A 50-pound per square foot line load was assumed for the office space, and a 20-pound per square foot allowance was made for the partitions.

Factors common to all three of the designs were fire-resistance, adaptability and utilization.

No attempt was made to incorporate for the comparisons the layout of the store portion (first floor), nor the office areas of the second and third floors. The dimensions of the building (width and depth) were selected for adaptation to most city or suburban lot sizes and zoning restrictions.

"The cost comparison revealed," Yeager pointed out, "that the first type of construction would cost an estimated $11.98 per square foot of building area; the second type would cost $9.50, and the third type would cost $7.77 per square foot of building area.

"By using the cost figures and a square footage of 5,880 (that of the hypothetical building), builders can readily compute that the structural frame for system No. 1 would cost $69,442.40. The cost for system No. 2 would be $55,860. The third system would cost $45,687.60."

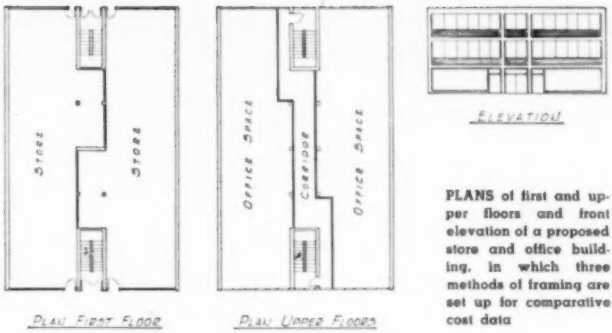
Factors which pointed to the advantage of the 3-story light steel frame system over the other two systems compared, were, according to Yeager:

ECONOMY. The materials for the structural frame arrive on the job with dimensioned prints, marked and identified for quick placement in the structure. The builder can quickly erect these tailor-made items and close in the building from the elements. Lost time from weather interruptions is thus reduced to a minimum. Form work and scaffolding are reduced considerably, affording more work room and space for storing materials under shelter within the structure as they arrive on the job.

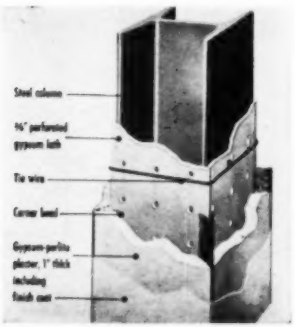
STEEL SAVINGS. Critical structural steel can be saved. Since the lightweight-aggregate-plaster-over-gypsum-lath fireproofing reduces the dead load design requirements in the conventional steel frame, the builder, as a result, can work with lighter transporting and hoisting machines. In addition, light steel frame construction assures earlier occupancy of the building, offering the owner quicker return on his investment.

Because the dead load weight of the light steel frame is about half that for the conventional steel frame, the structural members are considerably reduced in size. Actually, by comparison with the heavier steel frame, the light steel frame saves 16 per cent of structural steel. It is significant that the cost is reduced by 35 per cent.

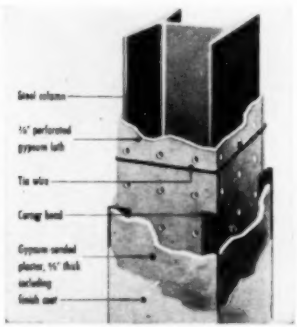
The reinforced concrete frame has been cited for its economy and low steel consumption. Nevertheless, the fact remains that the light steel frame costs 18 per cent less than the most economical reinforced concrete construction. Since even the conventional steel frame is still being used in our present economy, it would seem that no builder should be forced to sacrifice this saving simply because the reinforced concrete frame consumes less steel than the light steel frame. It is significant that the use of the concrete reinforced frame, al-



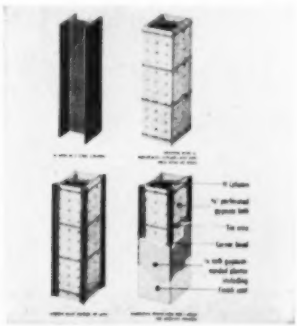
PLANS of first and upper floors and front elevation of a proposed store and office building, in which three methods of framing are set up for comparative cost data



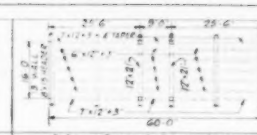
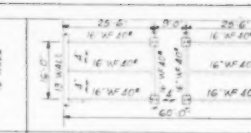
DETAILS for 2-hour fire resistance



1½-HOUR fire resistance



1-HOUR fire resistance

Comparative Cost Data for Two Floors and Roof Story Ht 9'6" Hollow Block & Roof & Bldg Apmt Conv. AGAT A 12-9-1921									
Type of Construction	(A) 2 Conc Slab on Steel Joists Steel Beams Gypsum Fireproofing Steel Columns Gypsum Fireproofing Fireproof Gypsum Ceiling			(B) 3 Conc Slab & Conc Joists Concrete Beams Concrete Columns Plaster Ceilings			(C) 4 Conc Floor Slabs Steel Beams, Conc Fireproofing, Steel Columns Conc Fireproofing Plaster Ceiling Directly on Slab		
	Quantity/□	Unit Price	Total Price	Quantity/□	Unit Price	Total Price	Quantity/□	Unit Price	Total Price
Roof — Steel — Joists	15.19#	14	2.12						
Roof — Steel — Beams	5.70#	132	75				22.49#	132	2.97
Roof — Steel — Total	20.89#		2.87				22.49#		2.97
Floors — Steel — Slabs	2'0"x2'0" 4.4# 1.76#	13/#	.52	9'0"x5'0" 4# 44	05/□	20	4.04#	10	.40
Floors — Steel — Joists				9.91#	10	.99			
Floors — Steel — Beams				2.19#	10	.22			
Floors — Steel — Total	1.76#		.52	13.54#		1.41	4.04#		.40
Floors — Conc — Slabs	67CF	.93	.62	1.0CF	.93	.93	1.33CF	.93	1.24
Floors — Conc — Joists				1.0CF	.93	.93			
Floors — Conc — Beams				.36CF	.93	.33	.66CF	.93	.61
Floors — Conc — Total	.67CF		.62	2.36CF		2.19	1.99CF		1.85
Floors — Forms — Slabs				3.87#	.75	2.90	3.58#	.75	2.69
Floors — Forms — Beams				.29#	.60	.17	1.88#	.60	1.13
Floors — Forms — Total				4.16#		3.07	5.46		3.82
Floors — Lath	4.08#			2.90#			0.0		
Floors — Plaster	4.08#	.69	2.82	3.12#	.60	1.87	4.00#	.42	1.68
Floors — Steel — Steel	2.80#	.132	.37				3.28#	.132	.43
Floors — Steel — Joists				1.28#	.10	.13			
Floors — Concrete — Concrete				.096CF	.93	.09	.078CF	.93	.07
Floors — Concrete — Forms				.38#	.60	.23	.36#	.60	.22
Floors — Lath	.00952 Column Stories/□	@ 39.00	.37	.00952 Column Stories/□	@ 18.50	.18	.00952 Column Stories/□	@ 18.50	.18
Floors — Plaster									
Floors — Steel — Joists	.52#	.10	.05	9.2#	.10	.09	1.05#	.10	.11
Floors — Steel — Concrete	.17CF	(Incl Forms)	.90	.26CF	(Incl Forms)	.90	.28CF	(Incl Forms)	.90	.25
Tot Vol Conc	.84			2.72CF			2.35CF		
Tot Wt Steel	25.93#			15.74#			30.86#		
Tot Vol Plaster									
Total Unit Price Per □ Area			7.77			9.50			11.98

COST SAVINGS developed in unit price per square, through use of lightweight aggregates in column (A) framing, compared to the more commonly used methods of framing shown in columns (B) and (C)

though offering some advantages in steel consumption, nevertheless penalizes the builder at the rate of $1.73 per square foot of building.

CORRELATION. This subject concerns the basic function of the builder to correlate the work of the various subcontractors who work under his supervision. With the light steel frame and bar joist construction, mechanical and electrical systems usually can be installed on a one-trip basis.

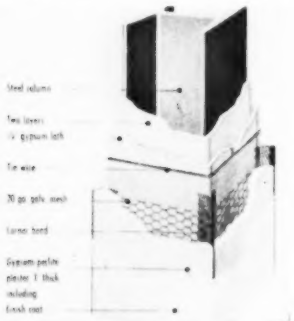
FLEXIBILITY. The light steel frame system used in this 3-story structure fits into modern design perfectly and, therefore, combines efficient structural functions with exclusive architectural convenience and utility. The wide variations in span lengths which can be selected give more usable room to the owner, since fewer columns and walls obstruct the flow of business activity within the finished stores and offices.

FIRE-RESISTANCE. Using this type of construction, the builder can assure his client that he is obtaining a unit which will receive most favorable coordinated insurance rates for this type of building and occupancy.

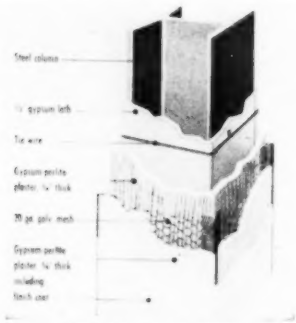
PERMANENCE. Steel construction for floors has been in continuous use for approximately 75 years. Gypsum has been used in construction for centuries. Add to this the plus factor introduced by lightweight aggregates in the plaster mixes and the builder can be confident that he has economy, structural stability and fire-protection in universally accepted materials of tested value.

All of the structural elements of the light steel frame are fireproofed with gypsum lath and lightweight aggregate gypsum plaster.

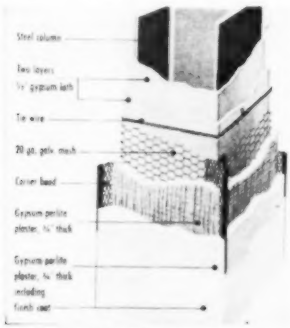
In the fireproofing construction, steel columns are wrapped with one or two layers of gypsum lath, which is held in place by tie wires, and plastered to the thickness meeting the required fire-resistive rating. Choice between one layer and the two layer systems of lath depends upon specific job conditions. If the lathing is let on a subcontract basis, greater economy will be achieved by using the method which will permit the lather to complete his work on the column in one single operation. On the other



3½-HOUR fire resistance



3½-HOUR fire resistance



4½-HOUR fire resistance

hand, if the plastering contractor employs the lather, there is little inconvenience in having the lather return after the scratch coat of plaster has been applied.

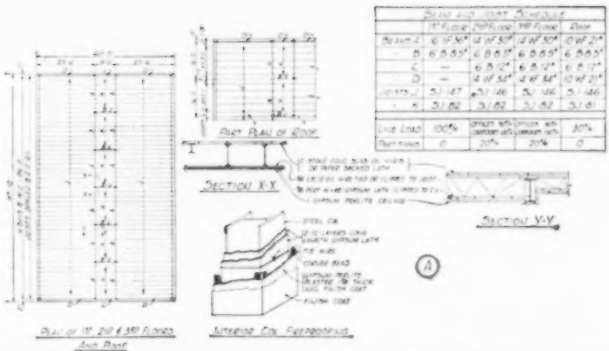
Floor beams are fire protected by attaching ¾ inch channels to the beams for support of gypsum lath, which is secured with wire clips. These clips engage the furring channel at the advancing edge of the lath. The opposite end of the wire clip passes through the eyelet of the preceding clip, thus giving continuous support to the lath under the channel. The lath is plastered to the thickness required by the desired fire-resistive rating. If girder beams project below the ceiling line, the exposed portion is furred in the conventional manner with gypsum lath for plastering.

The two-inch solid gypsum lath and plaster partition is used as a companion construction to attain the best advantages offered by lightweight aggregate fireproofing. These partitions consist of ½ inch thick gypsum lath in long lengths extending from floor to ceiling. The lath is centered in a floor runner assembly which provides a metal base at the floor. It is secured at the ceiling in concealed runners or tie-wired to cornerite. To provide temporary rigidity for plastering, ¾ inch cold rolled channels are placed longitudinally, at the center or third points depending on ceiling height, and the channels are secured to the construction at the ends of the partition. If the partition exceeds 10 feet in length a temporary two-inch vertical channel is wedged between the floor and ceiling alongside the ¾ channels and tie-wired to them for supplementary support.

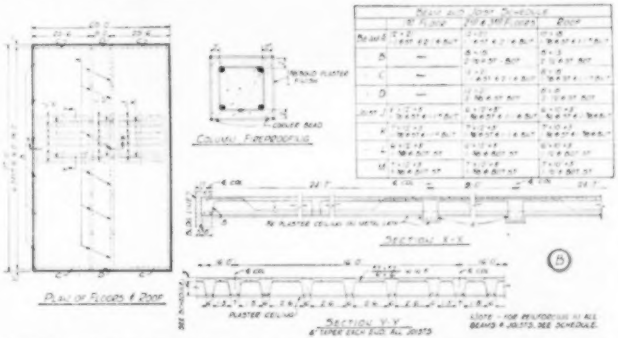
A scratch coat of gypsum plaster and lightweight aggregates is applied to both sides. After setting, a brown coat is applied to the side opposite the braces. When the brown coat has set, the temporary braces are removed and used elsewhere, and the side which was braced is brown coated. When plastered to a total thickness of two-inches with lightweight aggregate plastering, the partition is 1½ hour fire resistive. An increase of ¼ inch plaster thickness increases the fire resistance to two hours. These partitions weigh about 12 pounds per square foot as compared to approximately 40 pounds per square foot for conventional masonry partitions.

"A method has been developed, also, for adapting this construction to the furring of exterior walls. A half section of a floor runner is placed on the floor alongside the wall and cornerite is secured immediately above on the ceiling. The lath is stayed laterally with a horizontal ¾ inch channel secured to exterior wall with wall anchors. Each gypsum lath (in length equal to the ceiling height) is tie wired to the furring channel and the cornerite at the ceiling. It is then ready for plastering."

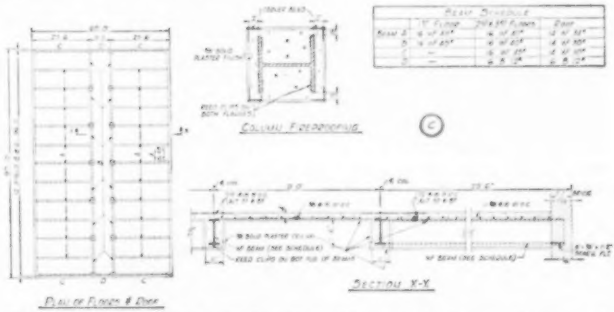
Thus, a unit system of construction is provided consisting of furring of exterior walls, solid partitions, fireproofing of columns and fireproofing of horizontal structural steel members, each system accurately designed to provide for whatever fire resistive requirements may be needed. It is significant that no new or untried materials are used in these systems. The materials and methods are well known to the building industry; particularly to the building trades. Like many of our major construction advancements during recent years these systems involve only new assemblies of time tested materials.



BECAUSE of use of lightweight aggregates in floor slab, light steel joists are employed as floor framing members. Several thicknesses of gypsum plaster are sufficient for fireproofing columns and beams



TYPICAL method of reinforced concrete joist, (pan construction), beam and column framing, with integral fire-proofing

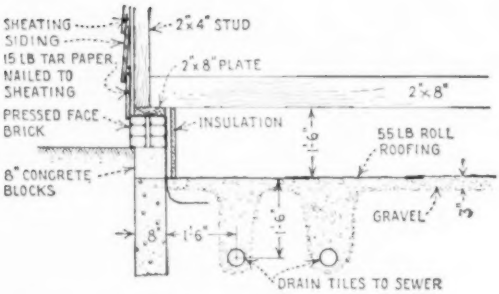


TYPICAL method of framing using heavier steel beams and columns with concrete fireproofing. Floor slab spans the area between beams

LOCKWOOD-DESIGNED TRENCHER digs an 8-inch trench. The equipment enables the builder to pour a foundation without forms

Saving with New Methods In Construction And Heating

Rodney M. Lockwood, Detroit builder and past president of the NAHB, delivers a plus value

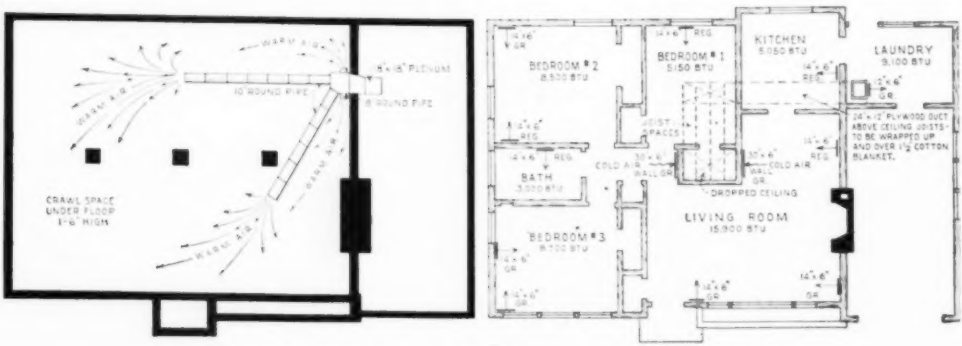


PREPARATION of the 18-inch crawl space is the biggest factor in the success of the new heating system

AFTER reviewing Rodney M. Lockwood's building operation it isn't startling to learn that he is repeatedly told by purchasers that his homes sell at $1,000 under the prevailing Detroit market. He has developed innovations in building and heating techniques that result in sizable cost reductions. Lockwood builds two and three bedroom homes selling from $12,900 to $15,900 including $500 worth of landscaping for each individual lot.

One of the techniques designed to speed production, and save material and labor costs, is an 8-inch trench foundation wall for basementless construction. The builder designed the trencher head for digging the 8-inch foundation. Dug well below the frost line, the trench is poured to grade without using any type of concrete forms. Felt is laid over the side walls of the trench so dirt will not fall into the mix and weaken the wall.

One course of 8-inch block is laid on wall and three courses of pressed brick are laid on the



OPERATION of the combination radiant and forced warm air heating system is shown here

block. The block is plastered and after back filling, only the pressed brick is visible. The operation saves the builder six yards of concrete or about $60. Labor, forming, and handling bring the total saving to $150 a house.

Time and material savings are evident as the builder does not have to handle or repair forms, or organize pouring schedules for concrete forms. FHA has approved this type of foundation in that area and Lockwood has not had any failures.

Another savings feature is the builder's crawl space plenum heating system which combines forced warm air and radiant heating. A counter flow, gas-fired, warm air furnace is located in either the utility room or a furnace room. Warm air is discharged into the 18-inch crawl space which acts as the heating plenum. Because the underfloor area is warm, heat is radiated through the floor. Baseboard registers allow the heat to enter rooms from the plenum.

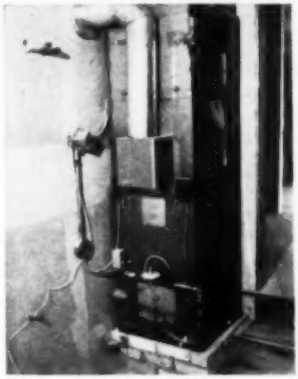
Twice as many registers are used as in a normal duct system. Half of the registers are the adjustable type so that the system may be balanced. No attempt is made to include duct work in connection with the base registers. The exterior wall fire-stop is raised and forced warm air enters at this void. Register faces are installed on the room walls.

A single cold air return is located in the center of the house. In heater room installations in the center of the house, the ceiling is dropped eight inches. Two 6x30-inch registers draw the cold air from the bedroom and living room areas. Where the furnace is located in the utility room at the far end of the house, a centrally located closet has the ceiling dropped. The cold air is pulled through a plywood duct to the furnace. The insulated duct is located in the attic.

FOUNDATION WALL is poured to grade and one course of 8 inch concrete block laid on the wall. The three courses of brick are visible after back filling

For successful operation of this heating system the crawl space plenum must be dry. To insure dryness, Lockwood installs two runs of drain tile, 18 inches below grade. These run the length of the house and are connected to a "Y" in the sewer line. Four inches of stone are placed over the ground and topped with 55 pound roll roofing. The crawl space is insulated at the foundation walls with blanket insulation. The insulation is installed between the floor joists down to within one inch of the ground.

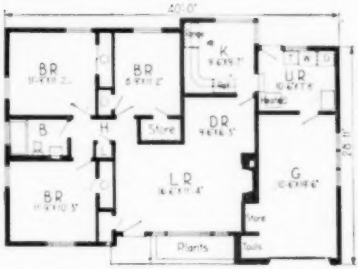
The saving realized with this system is $200 and 300 pounds of metal. A sheet metal plenum is used from the furnace to the crawl space. The plenum has 10-inch round stubs that direct the flow of heat throughout the



FURNACE in the utility room is raised by the brick work. A sheet metal plenum directs warm air to the crawl space

TYPICAL STREET of Lockwood homes showing good exterior variations gained from using 6 plans with 4 elevations for each plan

HOW BUILDERS ARE DELIVERING MORE HOUSE FOR THE MONEY



GOOD ARCHITECTURAL TREATMENT is a feature of Lockwood houses. Plan features three bedrooms and attached garage

area. In the utility-room installation where the furnace unit is located at one side of the house, longer runs of 10 inch sheet metal pipes carry the heat toward the further room areas. This reduces the time lag.

The crawl space has adjustable louvers for ventilation. The builder has also found that by running the furnace fan for a few minutes each week during the summer, the crawl space remains dry during that season.

When the builder was asked about any hardwood flooring failures he asserted that he has not had one case where a floor warped or shrunk.

A furnace manufacturer ran tests of the system and found it to be satisfactory. The heat distribution from room to room and floor to ceiling was as their report showed "phenomenal." It was also found that the system consumed 8 per cent more fuel for an additional operating cost of 50 cents a month. The slightly higher cost can be offset by reducing the temperature two or three degrees and still retain comfort because of the warm floors.

Other Saving Practices

Savings of $80 a thousand feet for sheathing are realized by using 5/16-inch plywood instead of 1x8-inch lumber. Cost for the plywood in large quantities is $80 a thousand. The 1x8-inch lumber, including the one-third waste, brings that cost to $133 a thousand. Erection costs are increased $6 when lumber is used.

Pre-dipped shingles are used instead of shakes as the shingles are sold in four bundle squares, and the shakes in two bundle squares. The builder saves in both material and painting by using the shingles.

A 30 minute fire code approves the use of two layers of half-inch plasterboard on the walls between the attached garage and the house. Gypsum board scraps are used in the under layer.

Lockwood's construction runs 80 per cent three bedroom models with 66 per cent of his units having basements. He has six plans with four elevations each, for his basementless house. To insure further exterior variation, he uses eight colors. The exterior treatment combines shingles with other materials: vertical siding, horizontal siding, and brick veneer.

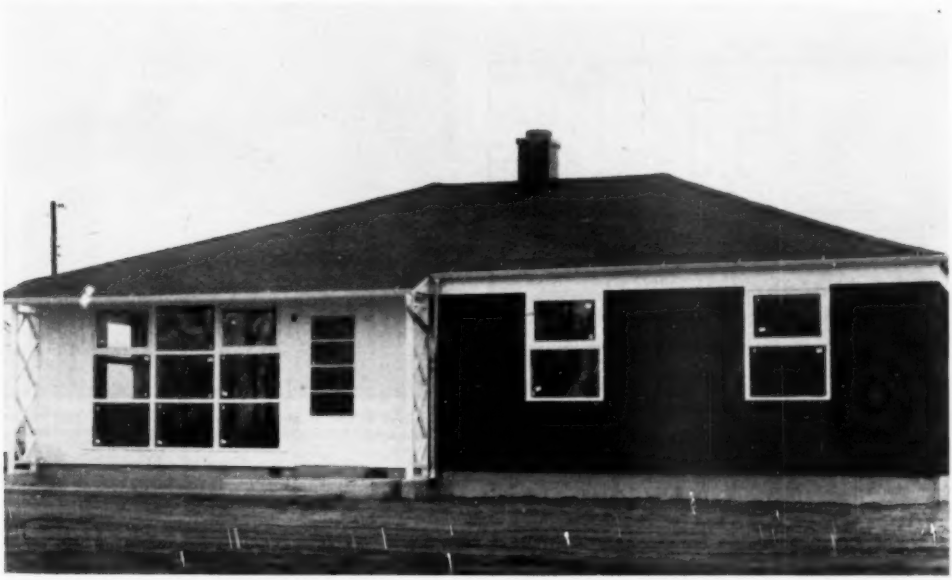
Features of the house include good sized bedrooms, each with a large wardrobe closet. A fireplace, guest closet, and picture windows in the living-dining area. Clay tile floor and wainscoting in the bath, interior entrance to the utility room from the garage, and a disappearing stairway which permits use of the attic area for storage. The fully landscaped lot is 60x130 with all improvements.

BRAND NAME PRODUCTS USED

- Armstrong linoleum
- Briggs plumbing fixtures
- Dexter hardware
- Flintkote roofing
- Ideal bath cabinet
- Luxaire furnace
- Minneapolis-Honeywell heating controls
- Sherwin-Williams paint
- Standard Cotton Products insulation
- USG paint and plasterboard
- Youngstown kitchen cabinets

CLAY TILE floor and wainscoting in the bath are standard in all houses

HOW BUILDERS ARE DELIVERING MORE HOUSE FOR THE MONEY



PLACE AND COMPANY'S 1952 HOUSE features four bedrooms, Thermopane windows, one and a half baths for $11,400

9 Cost-Saving Methods—

That enable South Bend builder to deliver more house for the money

Where This Builder Achieves

ECONOMIES

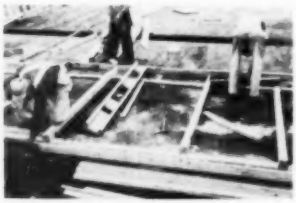
1. Machinery
2. Foundation
3. Precutting and Prefabricating
4. Lumber Upgrading
5. Warehousing
6. Framing Jig
7. Plumbing
8. Trim
9. Sheathing and Siding

A SCREENED out group of pilot houses under construction recently stirred home buyers' imaginations as to what Place and Company, South Bend, Indiana, builders were offering for 1952.

These pilot houses exemplify the organization's cost-saving methods which enable the production of more home for the money. The three and four bedroom models incorporated such plus features as complete fenestration with Thermopane windows as well as the convenience of one and a half baths. The houses sell from $10,600 to $11,400, including a fully improved lot.

An aggressive approach to all building cost problems by this organization has resulted in improved construction methods and reduced costs. The employees and management of

MACHINERY ATTACHMENTS for a tractor reduce the builder's land preparation costs. Here the machine is digging sewer and water lines



PRECUT LUMBER fitted into proper openings on jig is nailed to form sidewall. This framing operation saves time and labor costs

HOW BUILDERS ARE DELIVERING MORE HOUSE FOR THE MONEY

PLAN of the four bedroom home features bath-and-a-half, dining area in the kitchen, and large wardrobe closets

STORAGE ROOM at rear of house included in the 1952 model. It is designed to accommodate large items

the company have developed nine major cost-saving operations.

Machinery

Machinery and power tools are used extensively by the company in land preparation, precutting, and mill work fabrication. One of the most useful machines, according to Andy Place, secretary-treasurer of the company, is a combination digger tractor. The unit has a digging attachment and track device. These additions to an ordinary tractor enable it to dig sewer and water lines. The unit cost $3,200. Other machines used in preparing land are bulldozers, trucks, tractors, and a power post-hole digger. Power saws, shapers, and planers are used in the precutting shed or in mill work manufacturing.

COMPLETE WALL was built in the horizontal position and raised

Foundation

The houses are built on a grade beam foundation. A 4-inch slab is tied into a steel reinforced 16-inch concrete beam. The beam rests on 10-inch concrete piers, which are set along the perimeter of the slab and under the load-bearing partition. The piers are dug with a power post-hole digger and poured to grade. They are between six and seven feet apart. The beam, slab, and all stoops are poured at once. To form the beam, a 16-inch highway curb form is used. Steel pencil rods tie the beam, and mesh is used in the slab. The insulation, plumbing lines, and perimeter heating ducts are placed before concrete is poured. As the whole operation is made in one pour, this foundation-slab system uses less concrete than a conventional foundation type slab and saves both time and material.

The company has made foundations of this type for homes of over 100 feet in length and has had no failures. The Indiana FHA has approved it for sandy soil.

Precutting and Prefabricating

When carload shipments of lumber arrive at the company's siding they are unloaded through the cutting and inspection shed. Clear pieces are set aside for special purposes. The company buys lower grade lumber and is able to up-grade enough for their millwork operation.

Framing lumber is precut and stored for delivery to the job site.

HOW BUILDERS ARE DELIVERING MORE HOUSE FOR THE MONEY

PRECUT and prefabricated units are delivered to the site. All members are marked to speed the building operation

GRADE BEAM FOUNDATION with forms in place ready for concrete. Insulation, plumbing and heating ducts are in

Window and door units are prefabricated in the shop and primed before being sent to the site.

Material Warehousing

All manufactured items and paneling are warehoused by the company. Here, the units, if needed, are assembled, primed, or varnished before being sent to the site. Warehouse items are included in the load list.

Framing Jig

A framing jig has proved to be a valuable labor-saving device. The jig is laid on the slab and all precut members are marked for easy recognition. After framing, the sheathing and siding are applied. The complete wall is raised into its position in the house after it is finished.

Plumbing

The plumbing code of the area approves sitting fixtures within a limited distance of each other without reventing. Place and Company have kept within these distances in planning the one and a half baths in their 1952 model. To further reduce plumbing costs, they have manufactured two stack fittings that take the place of nine normal units. The two-stack fitting accommodates drains for laundry, sink, tub, two lavatories, and two toilets.

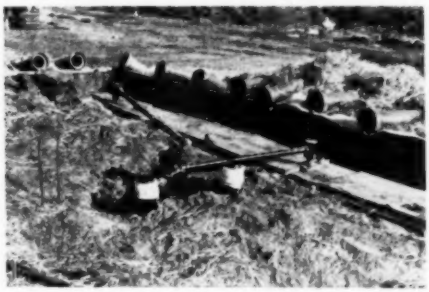
Trim

One of the most interesting features of Place and Company's cost-saving methods is the elimination of conventional door and window frames and their trim. Good grade 2x4's are run through a planer and then used to form a jamb and stud combination. A clear 2x4 header is used to complete the jamb.

Window frames are made of the same clear material. Special bullnose cap moulding has a ½-inch rabbet. This covers the edge of the gypsum board and fits against the stud frame. These trim-out materials are manufactured in the company's shop.

(Turn to next page)

PENCIL ROD runs tie the beam together. The form used for this foundation is a 16-inch highway curb unit

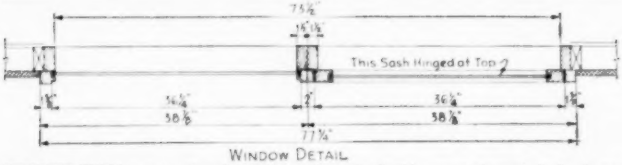


SOIL FITTINGS as assembled for the bath-and-a-half. In the background is the perimeter vapor barrier and insulation in place. Tile for perimeter heating ducts are ready to install

BRAND NAME PRODUCTS USED

- American Standard plumbing fixtures and hot water heater
- Armstrong asphalt tile
- Conco furnace
- Dexter hardware
- Faries bath cabinet
- Fir-Tex sheathing
- Formica counter tops
- Kitchen Maid kitchen cabinets
- Lightolier lighting fixtures
- Minneapolis-Honeywell heating controls
- Monarch doors
- National Gypsum wallboard and insulation
- O'Brien paint
- Ro-Tex folding door
- Sisalkraft building paper
- Thermopane windows
- Walton plywood
- Wel-Bilt folding stairway

HOW BUILDERS ARE DELIVERING MORE HOUSE FOR THE MONEY



WINDOW WALL construction detail shows how the builder uses clear studs for frame and structural combination

SIDEWALL is constructed in the horizontal position. Framing, sheathing, window and door frames, and siding materials are applied and sidewall tipped into position

Exterior Siding

Three types of siding are used for exterior variation. One is a 5/16-inch exterior grade plastic-faced plywood, cut to 12 inch widths. The plastic-faced material takes paint very well and is not affected by moisture or vapor. The large sheets are less expensive to apply.

Wood shingles used as another type of exterior finish are 18-inch and have an undercoarse of 15 inch shingles. A rustic siding, used as a third variant for outside covering, has the back unfinished surface turned to the weather and stained. This practice permits the use of siding with the finished surface damaged, which makes it very economical.

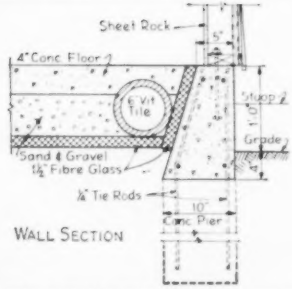
Sheathing is 25/32-inch insulating board. Shingles are applied to the sheathing with annularly grooved nails. Andy Place stated the shingles will break before the nail can be pulled out.

The three and four bedroom models have 952 and 1120 square feet, respectively. Room arrangements offer good circulation and many space-saving features. The laundry is located in a back hall, off the kitchen, and is large enough to accommodate both a washer and dryer. The dining area is adjacent to the L-shaped kitchen. Bedrooms have large wardrobe closets with basswood slat sliding enclosures. Walls are ½-inch gypsum board seamed, primed, and painted.

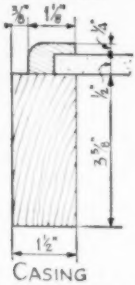
Additional Storage

Added storage facilities are included in the large shed built at the rear of the house. A disappearing stairway utilizes the attic space for storage. Ceiling joists of 2x8-inch lumber are placed in half of the house to permit storage of heavy items in the attic. Screens and storm doors are included in the price of the house.

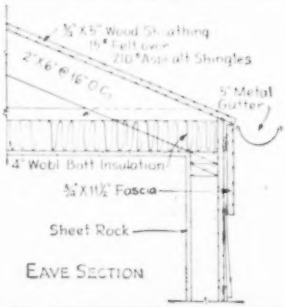
The exteriors of the 1952 designs are highly stylized. Five elevations are used for each model to achieve variety with the same floor plan.



GRADE BEAM DETAILS show the insulation and vapor barrier installation. Concrete posts every six or seven feet support the steel reinforced beam



CASING FOR WINDOWS and doors is a special rabbeted quarter round moulding. Door and window frames are 2x4's

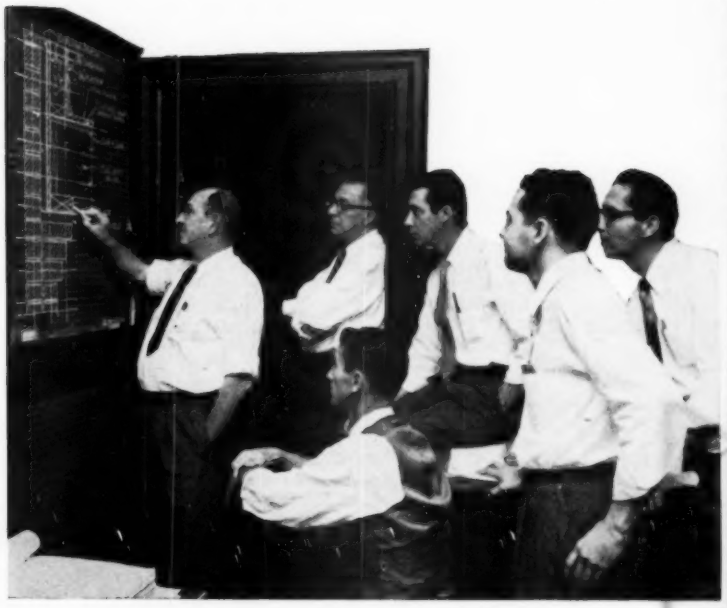


EAVE CONSTRUCTION without overhang is a labor and material saving

CONCRETE FOR FLOOR, beam, and stoops is poured at one time

FORM that held the vapor barrier, insulation, and ducts is removed

REAR STORAGE ROOM floor finishing is done at same time floor is finished



Charles C. Hartmann Sr. in doorway, Charles C. Hartmann Jr. right of doorway as chief draftsman. B. A. Stephenson, at blackboard, develops modular detail for staff discussion.

MODULAR DESIGN

PART 6

The architect, in close cooperation with the builder, makes profitable use of modular coordination: *by Lee Frankl.*

In the November *American Builder,* I reported on one contractor's reactions to Modular Coordination. Leroy James said it meant, "More profits—more and better house for the money—better relations with the home owner and the architect."

I wanted an architect's point of view, so I visited the Charles C. Hartmann Sr., and Jr., architects of Greensboro, North Carolina.

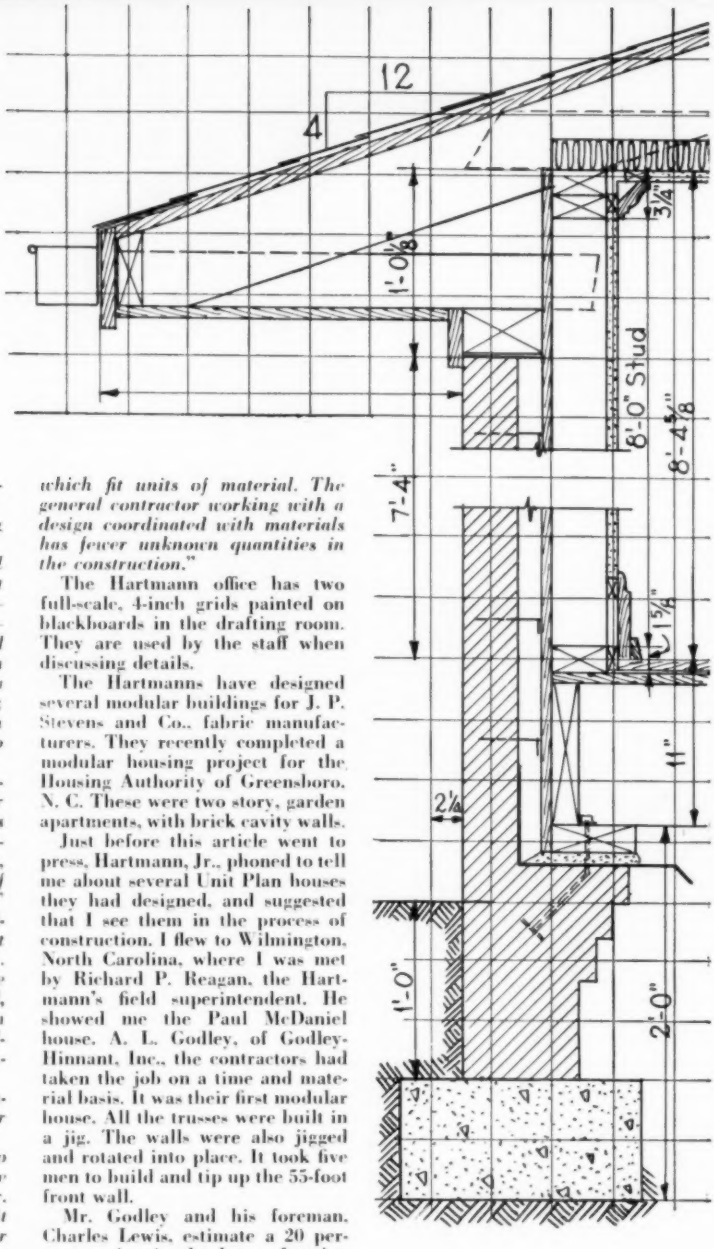
During World War II, while Hartmann, Jr. was seeing the world with the Merchant Marine, Hartmann, Sr., became interested in the 4-inch module. He gathered all the available data, studied it carefully, but made no decision about using Modular Coordination until his son returned.

Two days after removing his uniform, Hartmann, Jr., returned to the office—just to look around before taking a long vacation. He found his board covered with literature on Modular Coordination. Some serious talk between the partners, and young Hartmann forgot his vacation and started his study of modular methods. A year later, the Hartmanns began studies for the High Point Memorial Hospital, their first modular job.

I spent two days in Greensboro talking with the Hartmanns and their contractors. I asked them why they had changed over to a completely modular practice.

Mr. Hartmann, Sr., said, "*In 1945, I realized that Modular Coordination helps the architect to solve three most important problems: 1. To design and know the materials fit the designs. 2. To pass the design and sketches to the drafting room, with the knowledge that little or no adjustments need be made in dimensions. 3.To supervise the job under construction by* ***sight*** *as well as ruler, and* ***see*** *mistakes as they are made rather than after.*"

Young Hartmann chimed in with, "*Our first step was to put Modular Coordination into practice. We agreed it was all the way or not at all; prove it right (for us) or*



Wall section of Paul McDaniel house designed by the Hartmanns. See photographs on opposite page.

wrong, and so we started the hospital job."

I then asked about their drafting room problems.

Hartmann, Jr.: *"With sceptical draftsmen, I realized that I must work on the working drawings—coordinate plans and details—reference all materials to the grid lines. We convinced the draftsmen that Modular Coordination was a necessary tool for the architect; hard to use the first time, but when used properly of great advantage to us, the contractor and the client.*

"Our chief draftsman disliked, intensely, the transition to Modular Coordination. Today, he says, It is the easiest way to manage a drafting room, and to erect a building, because the basis is a line of thought that is understood by all."

Hartmann, Sr.: *"I wrote the specifications, with the provision that all materials must be modular. J. A. Jones Construction Co., built the hospital. Before the job started, their superintendent spent a day in our office going over all the modular details with our job superintendent.*

"Our second project saved us considerable time; saved us and our client money."

Hartmann, Jr.: *"I would like to make another point of importance to both designer and contractor. Stay with modular materials. If it is necessary to coordinate modular and nonmodular, cut and fit the nonmodular to the modular material.*

Frankl: *"Can I say that you are convinced that modular design is the architect's tool which establishes a harmony between the design, builder and materials?"*

Hartmann, Jr.: *"Yes, that's right. To put it another way, when new projects arrive in our office we think in terms of Modular Coordination; that is units of design which fit units of material. The general contractor working with a design coordinated with materials has fewer unknown quantities in the construction."*

The Hartmann office has two full-scale, 4-inch grids painted on blackboards in the drafting room. They are used by the staff when discussing details.

The Hartmanns have designed several modular buildings for J. P. Stevens and Co., fabric manufacturers. They recently completed a modular housing project for the Housing Authority of Greensboro, N. C. These were two story, garden apartments, with brick cavity walls.

Just before this article went to press, Hartmann, Jr., phoned to tell me about several Unit Plan houses they had designed, and suggested that I see them in the process of construction. I flew to Wilmington, North Carolina, where I was met by Richard P. Reagan, the Hartmann's field superintendent. He showed me the Paul McDaniel house. A. L. Godley, of Godley-Hinnant, Inc., the contractors had taken the job on a time and material basis. It was their first modular house. All the trusses were built in a jig. The walls were also jigged and rotated into place. It took five men to build and tip up the 55-foot front wall.

Mr. Godley and his foreman, Charles Lewis, estimate a 20 percent saving in the house framing and sheathing. Mr. Lewis feels additional savings can be made on the framing and sheathing of the next job.

Their construction schedule calls for laying all finished floors, installing finish on ceilings and all exterior walls, before placing any interior partitions. The interior partitions will be built in jigs and finished on one side. They estimate a 30 percent saving on labor and

material, over conventional methods, for this phase of the work.

Mr. Godley's firm also built the Wilmington Airport building, a modular job. They have joined the growing number of contractors who know Modular Coordination saves material and labor.

Several more modular houses have been started by the Hartmanns. They will keep photographic progress records of these jobs. We will bring them to you in later issues of the *American Builder*.

Modular Coordination has helped the Hartmanns develop a coordinated team of draftsmen in their office. They say this has saved 20 percent on man-hours spent at the boards. Since changing to the modular system, they have designed $15,000,000 of construction work of all kinds. This is truly a Modular success story.

The next article will cover preparation of the site and materials for both the Unit Plan House, slab construction, and the Precision-Built Home with basement. Both houses are modular, but the constructive systems differ.

Future articles will develop the step-by-step methods used in the construction of both houses.

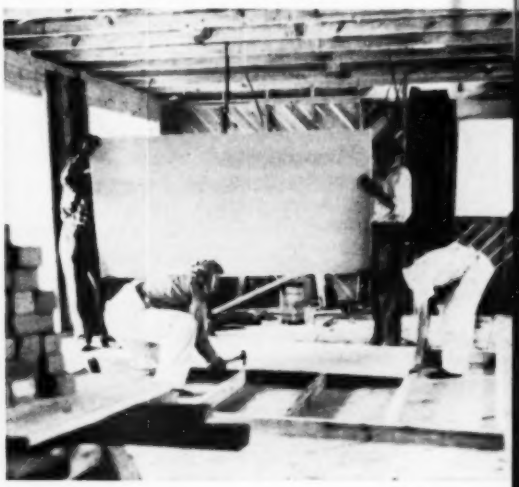
(Turn to next page)

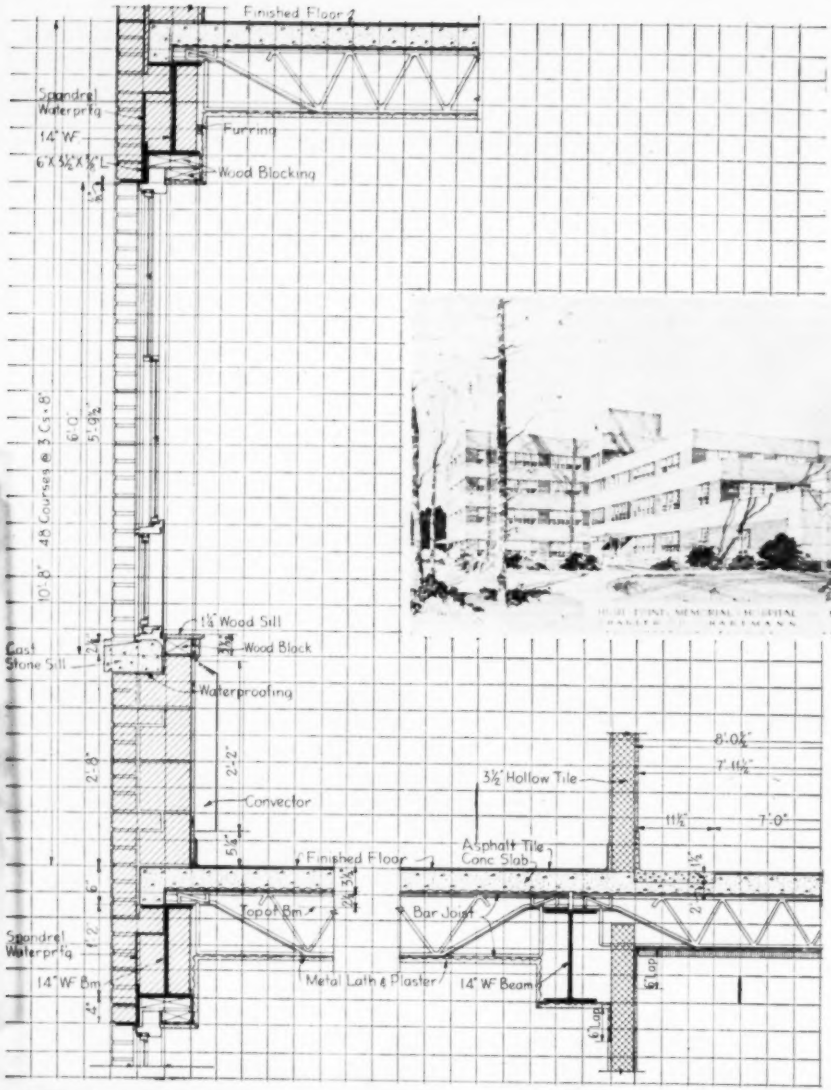
Left to right: Frankl, Lewis and Reagan.

Rear court formed by L shaped house and garage.

Note simplicity of truss design.

An interior partition framed and finished on rough floor.

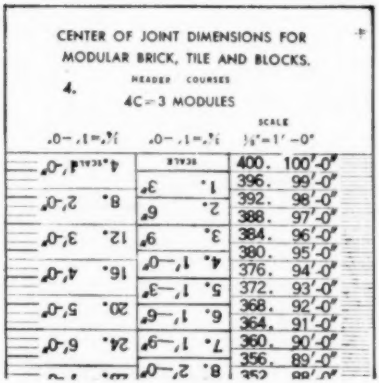


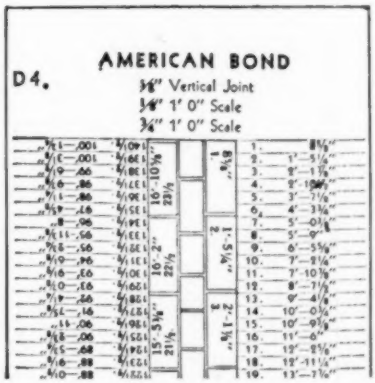


Rendering and typical wall details for the High Point Memorial Hospital.

Carter Fabrics Division plant of J. P. Stevens & Co., Inc. at Wallace, North Carolina, a completely modular structure designed by Charles C. Hartmann, A.I.A.

This scale is divided with hairlines at each module (4-in.), with heavier lines for each six modules (2'-0") and extra heavy lines every thirty modules (10'-0").
It may be used for ⅛" = 1'-0" when hairlines equal two modules (8-in.); heavier lines, six modules (4'-0"); extra heavy lines every thirty modules (20'-0").



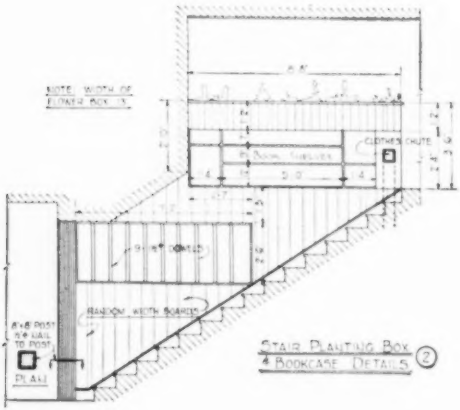


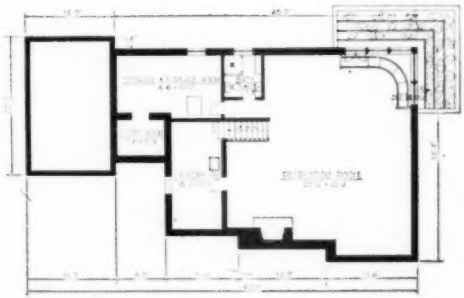
The "TIME-SAVER" scale, shown above, is one of several useful in work requiring ⅛", ¼", ⅜", ½", ¾" and 1½" scales. They have been developed by the Palmer Manufacturing Co. of Arlington, Va. This company has also designed vertical and horizontal modular scales in all the usual sizes for detailing brick and tile work. Sections of two such scales are shown at left. They may be procured from local brick manufacturers or direct from the Palmer Mfg. Co.

APPROACH TO THE INTERIOR arrangement centers around the side door adjoining the garage, rather than the front entrance. This is the center core of the house and leads to all major rooms including the bold approach to the lower level recreation room

A House Of

UTILIZATION OF AREA adjoining stairs to lower level is shown in detail below. Major portion of basement is utilized for a recreation room





Builders
Associated Contractors, Inc.
Minneapolis, Minn.

Architect
H. W. Fridlund,
Minneapolis, Minn.

YEARS of living in houses inspired the owner and his architect to incorporate in the plan for this house a great many conveniences and short cuts to save time and effort in carrying out normal household duties. These ideas, borne of experience, have also been adapted to add beauty and value to all portions of the structure. The owners, Mr. and Mrs. Eugene Murray of Minneapolis, Minn., are in the home building business and erected 300 houses last year in the $9,500 to $12,000 price range.

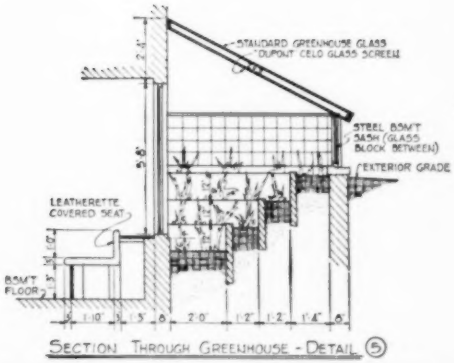
In analyzing the house, the question arises, as to why the basement stair is given such prominence in relation to the entire layout. The Murray's did not want a large house, but four married sons made it necessary to have an area where all could gather together. A large recreation room in the basement was the answer.

This room occupies two thirds of the basement with fireplace at one side and a greenhouse at the opposite end. The greenhouse extends beyond the wall lines and is built up in a

TYPICAL RANCH-TYPE EXTERIOR features Crab Orchard stone and shingles

SIX ROOM HOUSE and garage embrace 1750 square feet

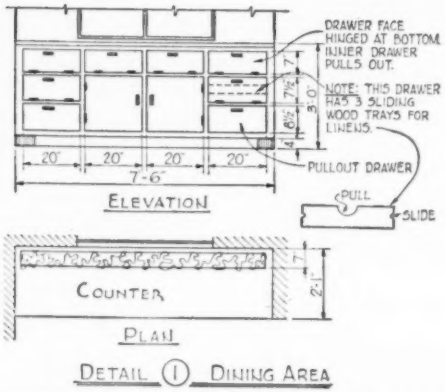
Many Ideas



BASEMENT RECREATION AREA feature is the large enclosed planting area extending beyond the foundation walls. This area is built up in a series of terraces, heated and lighted for effect. Exterior and interior views and sectional drawing above

COMBINATION PLANTING AREA and linen and dish storage extend across face of outside wall in dining room

KITCHEN AND DINING ROOM are planned as a single unit separated with cupboards. Note cutting boards used for serving



DINING ROOM CUPBOARD unit and planting box detail

series of terraces. Walls of recreation room are lined with Crab Orchard stone and knotty pine paneling. All structural wood beams are exposed in the ceiling. Two by twelve joists are run in pairs with 4-inch spacers between to form the beam. Underside of the beam is covered with a finished member. Finished V-joint material was used as subflooring and is exposed to form the finished ceiling.

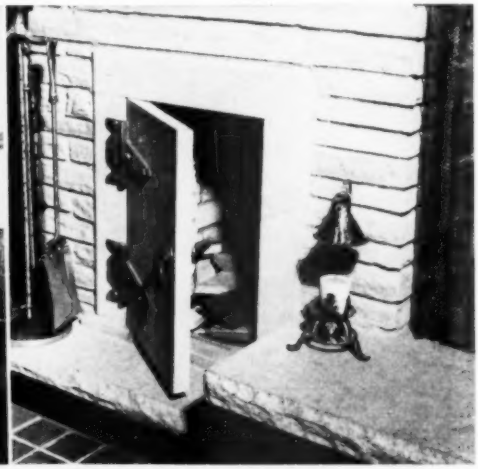
Basement heat is supplied through registers at door height. Return air ducts which extend to the outside walls are placed under the floor slab. In this manner exposed piping is avoided.

The built-up basement stair area contains clothes chute and book storage and is topped with a self draining planting box. Planting areas abound and are introduced wherever space permits.

A feature of the plan is the open arrangement of living, dining room and kitchen. This forms the pivot point of the house with the side entrance receiving most of the traffic. Access is direct from there to the basement. Bedrooms are located at the opposite end of the house with a den adjoining the kitchen. The service hall ceiling is furred down to serve as a supply chamber for distribution of heat to the various rooms.

This house contains 1734 square feet including one car garage on first floor and 1426 square feet in basement. House was built in 1950 for $35,000.

FIREPLACE occupys a feature position in the living room



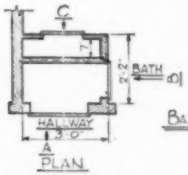
FIRPLACE wood storage unit has Bedford cut stone door

IN LARGE BASEMENT RECREATION ROOM, two 2x12 inch ceiling beams are grouped together with a finished member at bottom face. Steel beam is enclosed with wood. Walls are Crab Orchard stone and knotty pine

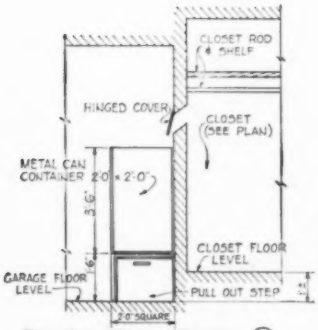
BRAND NAME PRODUCTS USED

- Andersen windows
- Armstrong cork and asphalt floors
- Cozy-Air warm air furnace
- Crane plumbing fixtures
- Honeywell heating controls
- Majestic fireplace damper
- Mengel doors
- Miami-Carey bathroom cabinet
- Modernfold sliding doors
- O'Brien paints
- Reynolds aluminum foil
- Rheem hot water heater
- Rubberoid asphalt shingles
- Schlage hardware
- U.S. Gypsum lath
- U.S. Gypsum mineral wool insulation
- Wagner upward acting garage doors

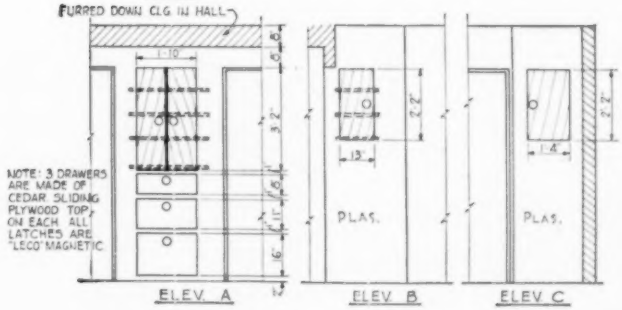
DROP AND RECEPTACLE for can storage, above. Dust-proof covers for linen drawers shown at right. Shelves in linen cupboard are accessible from hall and bathroom. Below: Detail drawings of can storage and linen shelves



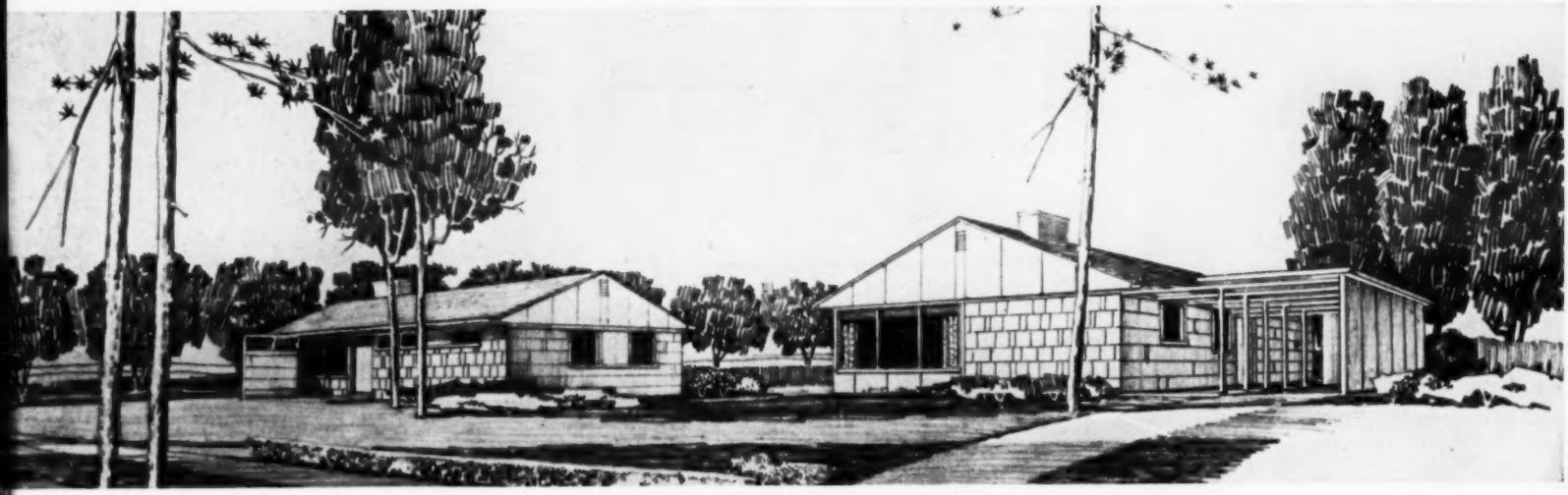
BATH ROOM CLOSET DETAILS (3)



TIN CAN DROP DETAIL (4)



AMERICAN BUILDER BLUEPRINT HOUSE NO. 62



TWO EXPOSURES of house show adaptability of plan to different sites; one an inside lot, the other a corner

Two-Front House Permits Effective Orientation

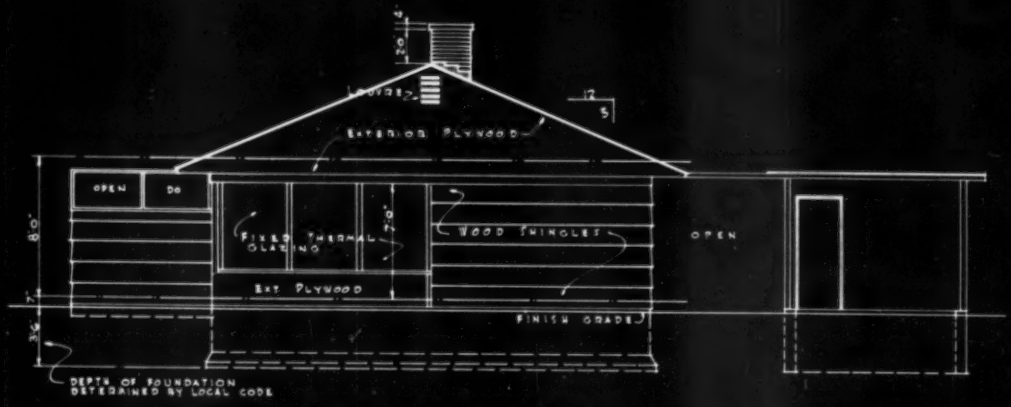
Designed by
Walter T. Anicka, Architect,
Ann Arbor, Michigan

THIS month's blueprint house definitely qualifies as an economy dwelling. One of the most important of its many economy virtues is the unbroken perimeter profile, 25x40 feet, which encloses an area containing three bedrooms, living, dining room, kitchen and bath.

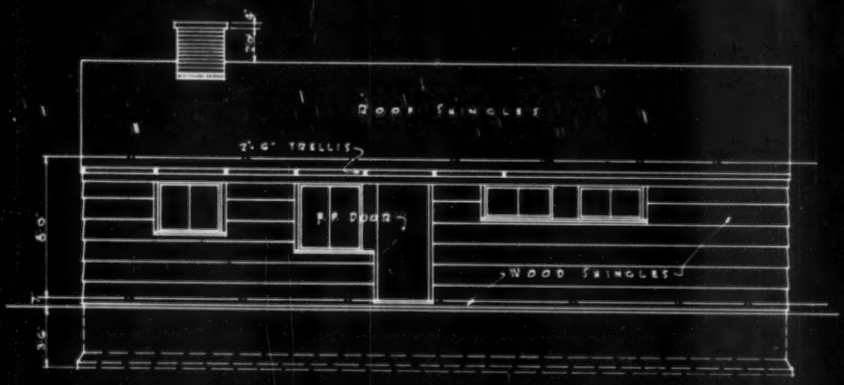
Giving the house additional width on one side is the detached single carport connected to the house by an overhead trellis. More width is obtained on the other side by an 8-foot extended wood fence bordering the terrace. This wood fence, which extends to eave line, together with the terrace, entrance door and large fixed windows, all provide the motif for the second front. The main front is the end view of the living room with fixed sash, carport and covered walk as features.

This house is planned on the basis of a 4-inch module, or a multiple thereof. Exterior walls, roof framing, trusses, partitions, windows and doors are planned to conform to a unit of 5 feet 4 inches. This also applies to the framing of the carport and covered passageway. This method permits a greater use of prefabricated units and a minimum of waste in framing materials.

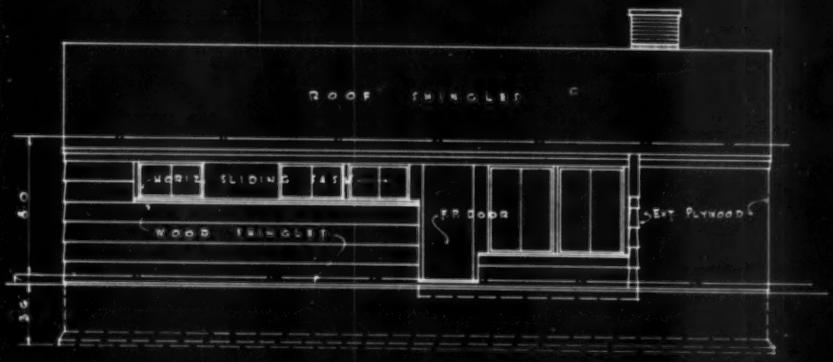
The house contains 1,000 square feet of living area within its over-all perimeter. There are 240 additional square feet for the carport and 160 square feet for the covered walk. Construction follows standard practice with 8-inch-thick concrete foundation walls, concrete floor slab over entire floor area, 2x4 frame walls above and wood trusses for roof framing. Exterior surfacing consists of wood shingles on side walls and ⅜-inch-thick exterior plywood on gable ends. The roof is covered with asphalt shingles.



·FRONT ELEVATION·

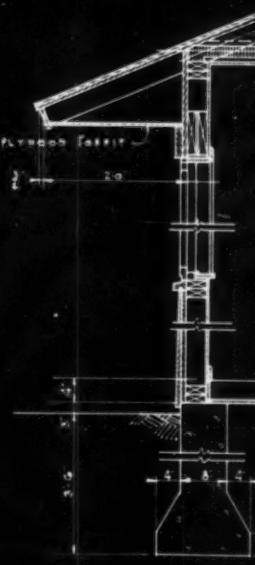


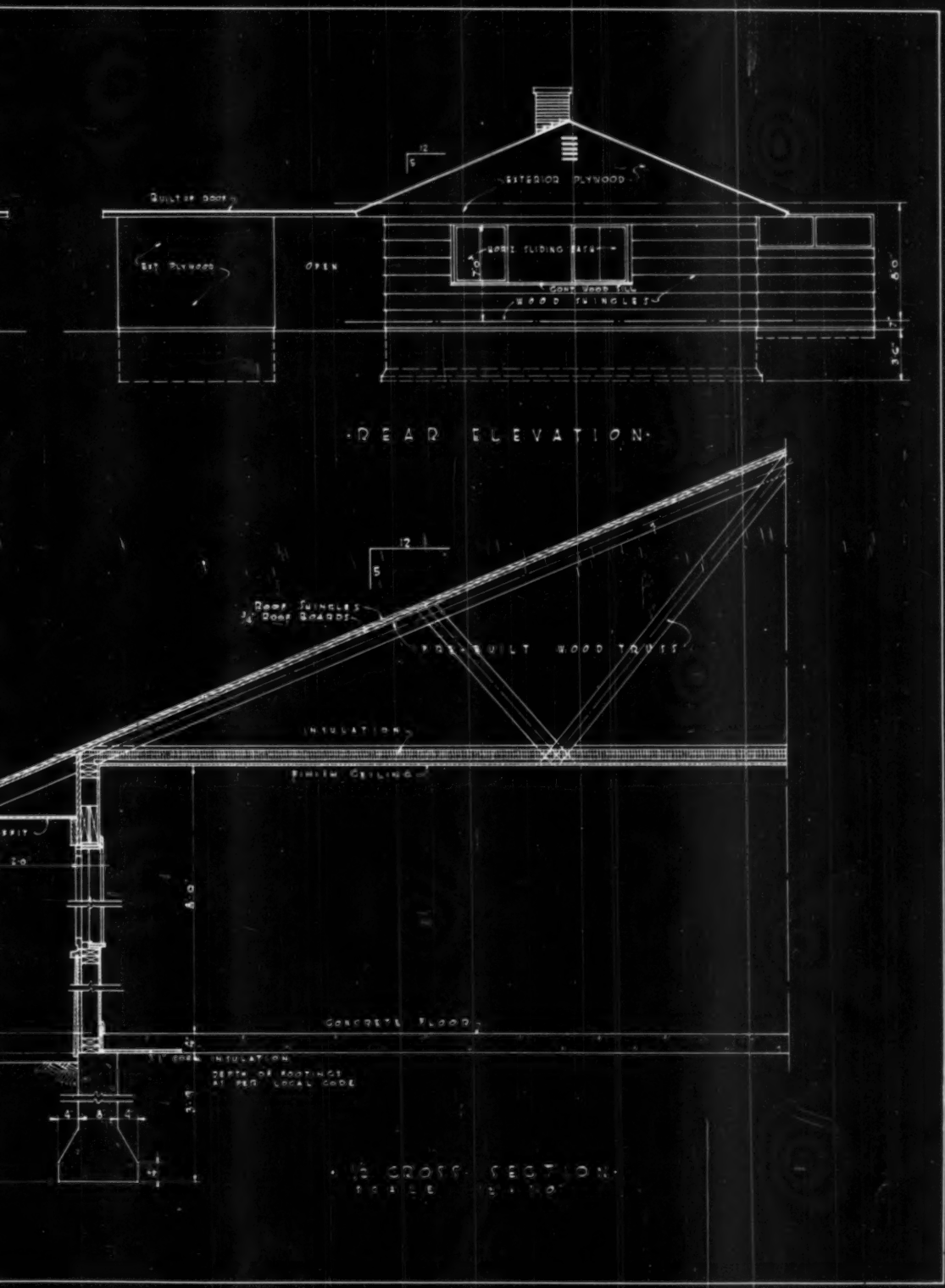
·RIGHT SIDE·

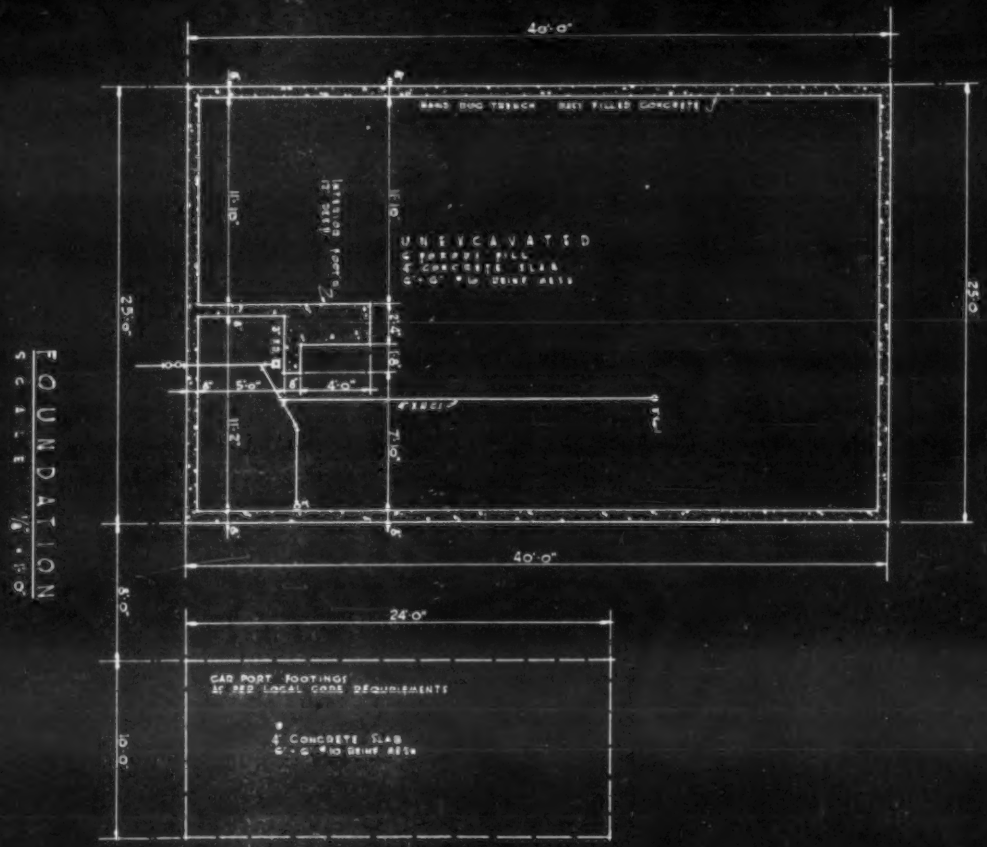


·LEFT SIDE·

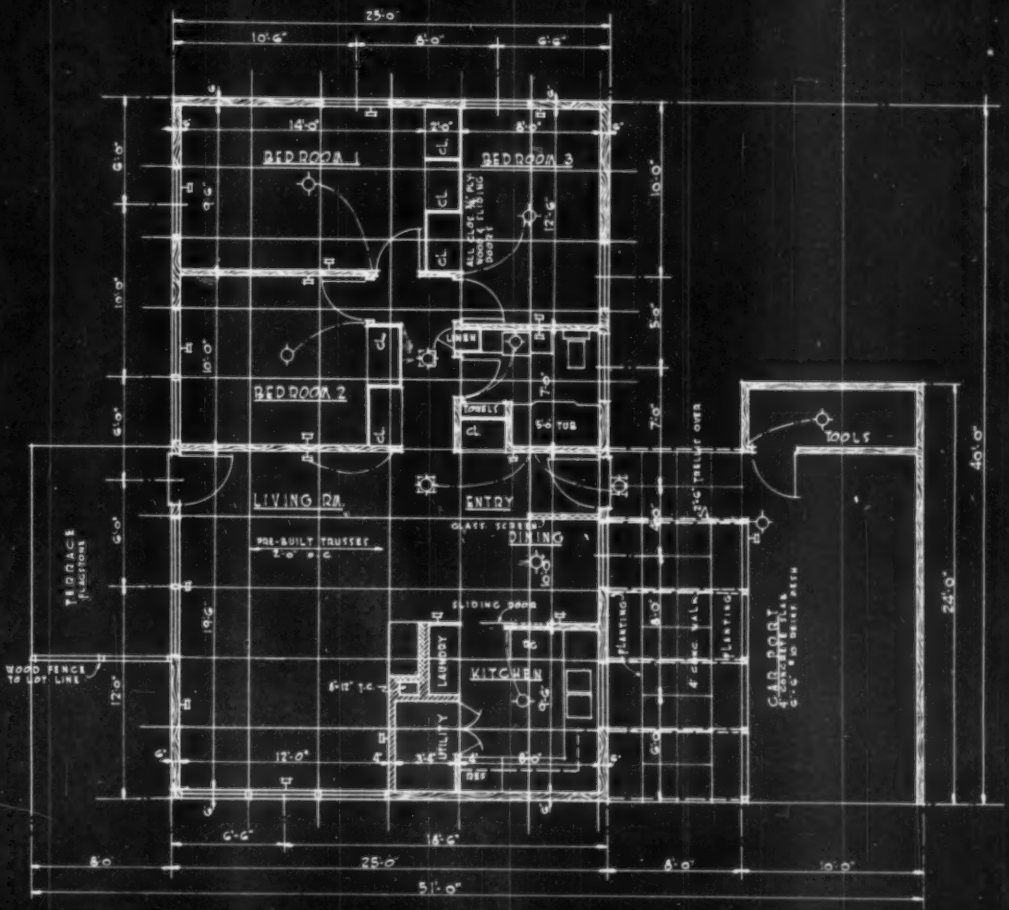
ALL ELEVATIONS 1/8" = 1'-0




BUILT UP ROOF
EXTERIOR PLYWOOD
EXT. PLYWOOD
OPEN
NOTE SLIDING GATE
COAT WOOD TILE
WOOD SHINGLES
REAR ELEVATION
ROOF SHINGLES
3/4" ROOF BOARDS
PRE-BUILT WOOD TRUSS
INSULATION
FINISH CEILING
CONCRETE FLOOR
INSULATION
DEPTH OF FOOTINGS
AT PER LOCAL CODE
CROSS SECTION



FOUNDATION
SCALE 1/8" = 1'-0"



FIRST FLOOR PLAN

SCALE 1/8" = 1'-0"

DESIGN NO AB 176

AMERICAN BUILDER BLUE PRINT SERIES

Designed By

Walter T. Anicka Architect

617 So. Forest Ave. Ann Arbor, Mich.

Simmons Boardman Pub. Corp. 79 W. Monroe St. Chicago, Ill.

Quantity List of Materials

For American Builder Blueprint House No. AB 176

Walter T. Anicka, Architect

General Information

House — Type ..... Frame
Area ..... 1,000 sq. ft.
Cube ..... 10,000 cu. ft.
Height taken for cube was 10 feet

Carport — Area ..... 240 sq. ft.
Cube ..... 1,920 cu. ft.
Height taken for cube was 8 feet

Porch and
Terrace — Area ..... 192 sq. ft.

Excavating

Trench for foundation ..... 130 lin. ft.
Chimney and column footings 1
Excavation for basement — yards ..... None

Cement Work

Foundations (not including garage footings if required) 540 cu. ft.
Concrete work ..... 1,220 sq. ft.
Thickness ..... 4 in.
Sidewalks ..... 26 — 2 ft. squares
Anchor Bolts ..... 20 — 1/2"x8"
Miscellaneous ..... 96 ft. flagstone terrace

Masonry

Type ..... Brick
Chimney ..... Brick
Flue lining ..... 16"8"x12"
Cap ..... Cement
Fireplace ..... One
(Details not given)

Millwork

Windows — Type ..... Sliding 1 light and Fixed
Windows Glazed including trim ..... 5 pair 18"x18"
1 " 18"x30"
3 " 18"x42"
2 " 18"x58"
3 fixed thermal glazed 42"x58"
Exterior Doors ..... 2 — 3' x6'8"
Slab Doors ..... 1 — 2'6"x6'8"
Exterior Millwork ..... 2 louvres
Interior Doors including jambs and trim ..... 1 — 1'2"x6'8"
2 — 1'6"x6'8"
1 — 2'4"x6'8"
4 — 2'6"x6'8"
Special Interior Doors ..... 1 sliding door hardware
Special Interior Millwork ..... 7 plywood closets, 3/4" plywood with sliding doors; 1 bathroom case; 1 set kitchen cases; 1 glass screen for dining space

Carpentry

Foundation Plates ..... 26 pcs. 2x4 — 10'
Studding and Plates ..... 190 — 2x4 — 8'
30 — 2x4 — 10'
18 — 2x4 — 12'
Ceiling Joist — Built-up Trusses ..... 21 — 2x4 — 8'
63 — 2x4 — 14'
Roof Rafters ..... 42 — 2x4 — 16'
16 — 2x6 — 18'
8 — 2x6 — 10'
Framing Lintels ..... 4 — 2x8 — 10'
2 — 2x8 — 12'
Roof Sheathing ..... 2,050 board feet
Side Wall Sheathing ..... 1,000 board feet
Side Wall Materials ..... Shingles — 700 sq. ft.
Waterproof plywood — 800 sq. ft.
Exterior Material — Soffits ..... 160 sq. ft. waterproof plywood
Eaves ..... 82 lin. ft. 1x4
150 lin. ft. 1x6
Porches ..... Terrace trim — 3 — 1x6 — 8'
Insulation ..... 1000 sq. ft. 4" rockwool
200 sq. ft. 1" cork insulation

Rain Conduction

Flashing ..... Chimney

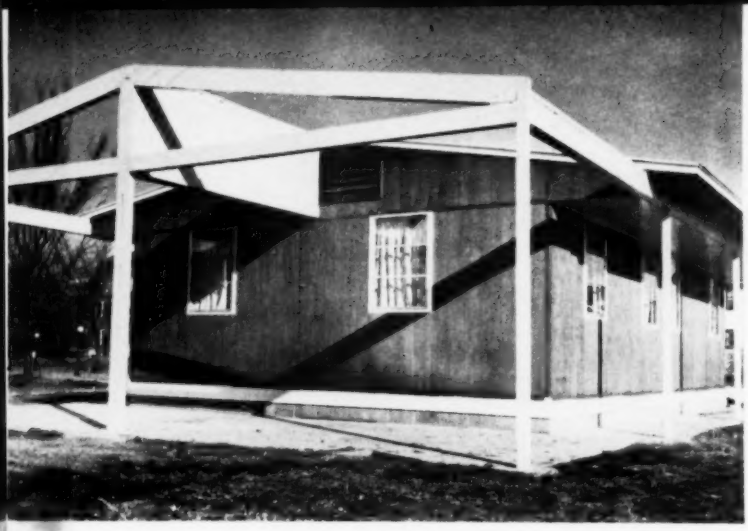
Roofing

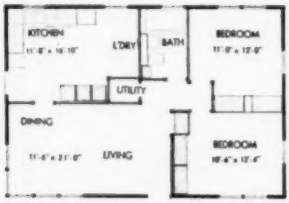
Type: Shingles ..... Area: 13 squares
Built-up roof ..... 3.25 square

Interior Walls and Ceilings

Area to be covered ..... Dry wall — 2,640 sq. ft.

● *This quantity list will be subject to variation depending on the common practices in various sections and municipalities of the country, the techniques of individual builders, the types of materials available locally and cost factors. The list published here is a suggested one, complete enough so that it can be used in arriving at a reasonably accurate estimate of the quantities and cost of materials that will be required to complete the structure. It was prepared by experts at the Edward Hines Lumber Co., Chicago.*



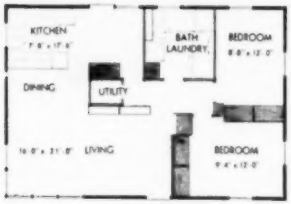


PLAN ONE

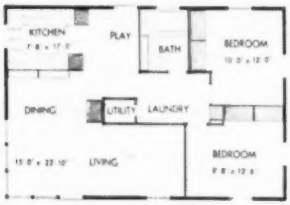
THE SPACE LABORATORY is a modern appearing structure with a low-pitched roof. Perimeter beams and plywood box girder support the roof and ceiling. All walls are non-supporting and can be moved

Space-Use Laboratory

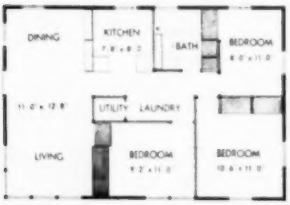
University research project endeavoring to find best solutions to room and space requirements for modern family living



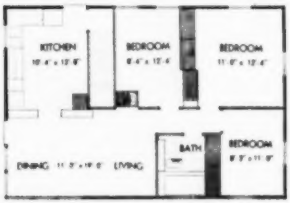
PLAN TWO



PLAN THREE



PLAN FOUR



PLAN FIVE

AN unusual house built by the University of Illinois' Small Homes Council will be used in a research project to test family reactions and their movements with different floor plans and room sizes. The experimental house or "Space Laboratory" is a project sponsored jointly with the Housing and Home Finance Agency. Its aim is to develop standards of space requirements for modern family living.

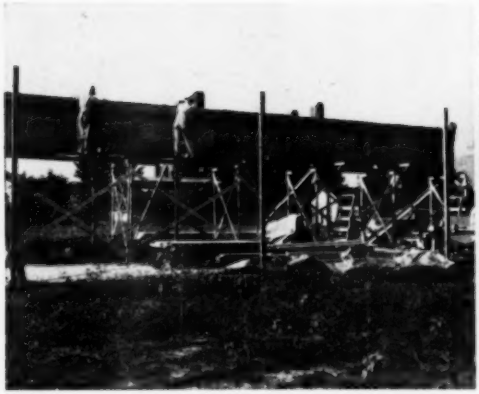
Two families will live in the Space Laboratory during the next 12 months. The families were selected as representative of those occupying small homes. Each family will consist of a couple, about 30 years of age, with two children —a boy and a girl. One child will be of school age, and the other pre-school age.

During each family's six months' stay they will utilize different floor plans. The university plans five different room arrangements. The family will design their own arrangements after the fifth month.

Living patterns of the family will be studied. Number of steps will be recorded by electric eye counters. Time clocks will be installed in the various rooms to determine the length of time each room is occupied. Each month the family's reactions to home occupancy with that month's arrangement will be recorded.

Plan One was used extensively by the university in faculty housing. Two bedrooms, bath, ample closet space, kitchen-laundry combination and living-dining combination are included in the 24x36-foot floor plan. The plan represents basementless construction and the partial basement will not be used by the family. Space has been allotted for furnace and water heater.

Plan Two reduces the size of the bedrooms, changes the working arrangement of the kitchen, increases the living



THE BOX GIRDER is laminated ¾-inch plywood, glued and nailed to each side of the chords. Top and bottom chords are 2x8-inch framing members

CEILING JOISTS bear on the plywood box girder and perimeter beams. The girder forms the ridge of roof. Finished plywood ceiling is nailed to the joists

Studies the Small Home

and dining area, and allows free space in the kitchen for either play or eating. Circulation from the kitchen to other parts of the house is improved. The unique factor in this arrangement is the placing of the laundry facilities in the bathroom. This arrangement also represents a basementless house.

Plan Three is much the same as Two except laundry facilities have been moved to a hall outside the bath. This arrangement permits larger bedroom but smaller bath.

Plan Four features three bedrooms. To gain space for the third bedroom the living-dining area and the kitchen were reduced in size. Bath and laundry areas remain as in Plan Three.

Plan Five utilizes the basement. All laundry and furnace equipment will be moved to the basement. The bath will be moved to the front of the house and nearer the three bedrooms. The kitchen arrangement will be changed to an L-shaped counter unit, and also contain the entrance to the basement.

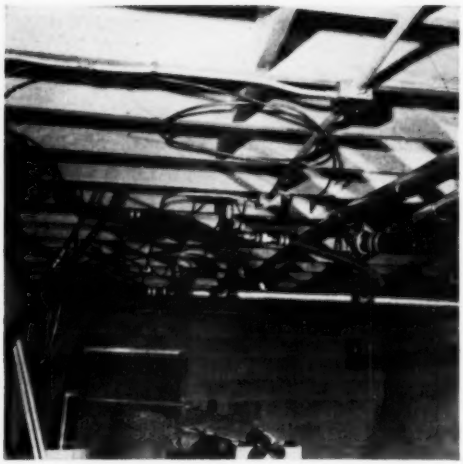
The house was designed by Professor Rudard A. Jones in consultation with Professor Jame T. Lendrum, director of the Small Homes Council, and Professor William H. Kapple, a member of the University Space Utilization Committee.

Furnishings were selected by Mrs. Mary Farnham and Professor Helen McCullough, member of the Department of Home Economics. Others participating in the study are Byron E. Munson and Richard Dewey of the Department of Sociology and Anthropology, and George Speer, HHFA housing research project engineer. [*Turn to next page*]

PARTITIONS are laminated T & G fiberboard placed in quarter round channels

BATH CORE shows the copper plumbing and the installation of water closet

BATH fixtures are movable. Tub is on casters. Core walls are asbestos cement



PLIABLE TUBING, rubber hose make possible flexible plumbing

KITCHEN CABINETS are on casters for easy rearrangement

Construction Details

To make possible the flexibility of room arrangement in the experimental house, both the exterior and the interior walls are non-supporting and free to be shifted around. The roof is supported by 10 columns, two of which support a plywood box girder. The girder is the ridge of the roof and is 48 feet long and four feet deep. Two smaller beams run the length of the house at the front and rear, supported by perimeter columns spaced 16 feet on center. Nailer posts are set between the ceiling and sill plate, and have the prefabricated exterior panels hung on them. Window and door units are hung on the nailer posts. Floor panels, 4x8-feet in size, are placed on the slab. Conventional joists are placed over the half-basement. The finish floor is ¼ inch hardboard.

Interior partitions are laminated fiberboard of three thicknesses. The center unit is extended to form a tongue and groove. The fiberboard units are 4x8 feet. These are placed in a channel made from quarter round moulding nailed to 1x4 ceiling and 2x4-inch floor plates. All plumbing connections are of flexible tubing so they can be moved. Bath fixtures are mounted on a plumbing-core wall and can be moved easily. The tub is on rollers. The kitchen cabinets are in small units on casters and can be moved about easily.

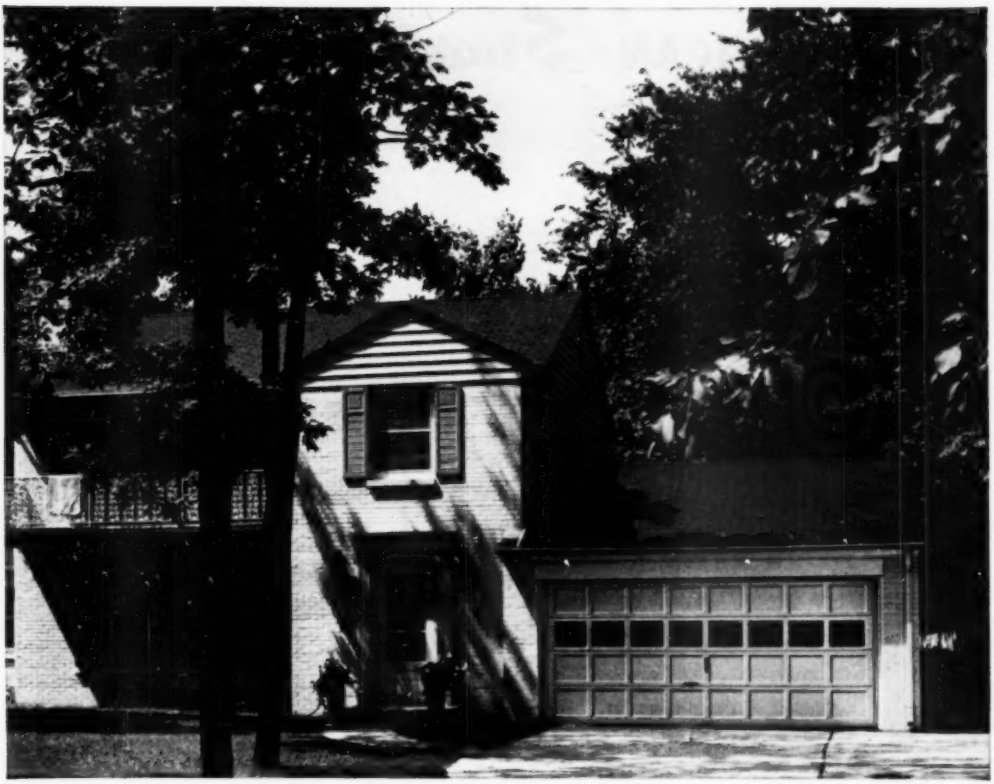
The electric wiring is in surface raceways so it can be moved without difficulty.

The heating system is high velocity forced warm air. The small ducts used for this system can be moved without major difficulty.

The construction has been planned so that both the exterior and interior panels can be moved with a few men in a minimum amount of time. The first year's study will incorporate a 24x36-foot floor plan, but the house can be increased in size to 36x48 feet.

INTERIOR of space laboratory simulates typical small home

ELECTRIC EYE records traffic between living room and kitchen



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*For Example: *Taper-Tite track and exclusive Seal-A-Matic hinges, which work together to hold door tightly against side and head jambs, yet readily permit easy opening and closing.*

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AMERICAN-Standard WARM AIR

WYANDOTTE **WINTERGLO**

For utility rooms, closets, alcoves. These two steel "high boy" type winter air conditioners are typical of the American-Standard line of smartly-designed heating units for small homes and individual apartments. The Wyandotte is a gas fired unit, while the Winterglo is designed for oil firing.

WINTERWAY **MOHAWK**

For basement installations. The steel, oil fired Winterway, popular for small to medium homes, is designed for unusual flexibility and ease of installation. The Mohawk, a de luxe cast iron winter air conditioner, provides automatic gas fired heating for virtually any size home. Both are typically compact in design.

NAVAHO **SHAWNEE**

For low-cost installations. The Navaho floor furnace is compact and shallow, can be installed easily in the floor of any small building, with or without basement, and does not require excavation. The Shawnee warm air furnace is ideal for installation in basements used as game rooms, laundries, or work shops. Both units burn all gases efficiently and economically.

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First in heating . . . first in plumbing

HEATING EQUIPMENT

... for every type of installation

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■ Choose American-Standard warm air heating equipment for basement installations or for small-space installations such as utility rooms, closets and alcoves. You'll find units in the American-Standard line that will fill the bill exactly. For American-Standard warm air heating equipment includes a wide variety of types, sizes and models of warm air furnaces and winter air conditioners —designed to burn gas or oil or coal—plus the new Mayfair Summer Air Conditioner and the electronic Magne-filter Air Cleaner.

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CLAY PIPE—*ESSENTIAL* ★ *ECONOMICAL* ★ *EVERLASTING*

These typical units will house defense workers manning U. S. Steel's new $500 million plant at Morrisville, Pa. Over 20 miles of Clay Pipe are going into the housing project alone.

USE CLAY PIPE FOR ESSENTIAL BUILDING

A gigantic housing project near Morrisville, Pa., is using more than 100,000 feet of readily-available Vitrified Clay Pipe — the one pipe you can rely on to meet building schedules and protect your reputation.

The new 3500-unit project will serve essential workers in U. S. Steel's nearby Fairless Works — the largest single expansion ever undertaken in the iron and steel industry. More than 300,000 feet of Clay Pipe are being used for the plant itself, in addition to miles for the housing project and the town's complete new sewerage system. It's the *only* readily available pipe that has proven its worth through years and years of trouble-free performance. Use Clay Pipe for *all* your building jobs. It never wears out.

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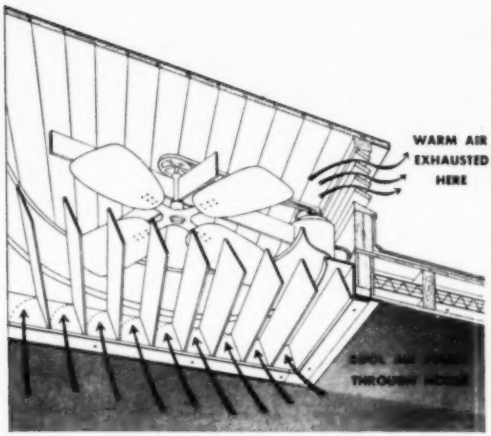
Vitrified

C-132-4

Architect:
Chloethiel W. Smith

General Contractors:
Manning-Winthrop Corp.

House Beautiful **climate control house night-cooled with a Hunter Fan**



This cutaway drawing shows ceiling shutter in hallway with Hunter Attic Fan above pulling in cool night air and driving out accumulated heat through louvered transoms. Result: cool comfort.

Effective use of fan ventilation in a modern, low-roof house

Summers are hot and humid in Washington, D. C., but occupants will be cool and comfortable in this HOUSE BEAUTIFUL Climate Control House. It has no attic, so Architect Smith located a Hunter Package Fan in the small space between roof and ceiling over the bedroom hallway. This quiet, powerful fan pulls cool night air in through windows, across bedrooms—forcing hot, stale air out through clerestory louvers.

This application shows the simple adaptability of the Hunter Package Fan to any home. The compact unit (complete with ceiling shutter) is easily and inexpensively installed. Whether you're planning housing projects or expensive homes, the owners will thank you for providing cool comfort during hot summer months. Hunter Fans are famous for dependable performance.

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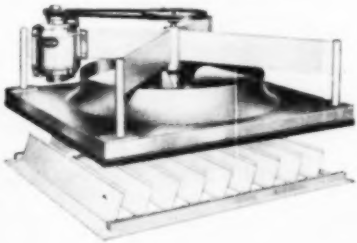
PACKAGE ATTIC FANS



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National HOMES CORPORATION, Lafayette, Ind.
EASTERN PLANT: HORSEHEADS, NEW YORK

Tops for any surface!

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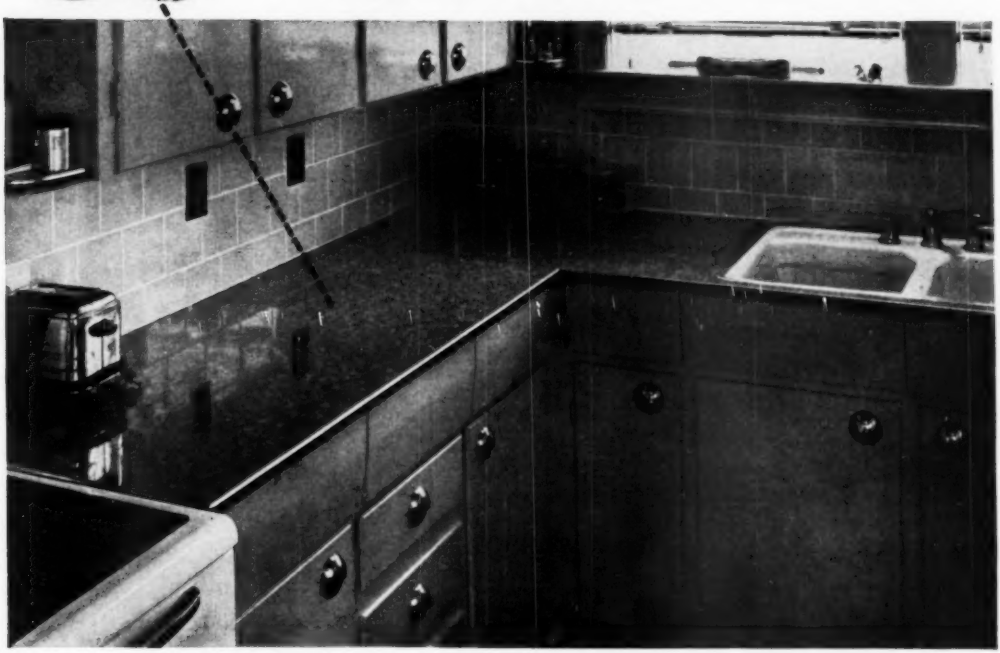

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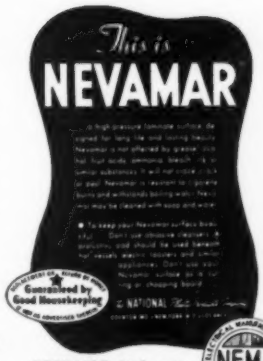

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Thermopane IN EVERY WINDOW

of moderately-priced houses

HOW? By the use of standard sizes and simplified installation.

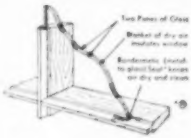
These houses feature smart and varied window treatment. Yet all the windows in the entire development use only two standard sizes of *Thermopane** insulating glass. Material costs, time and on-the-site labor were all reduced by intelligent window planning.

Such economies put all-*Thermopane* houses within the cost limits of development homes and add tremendous plus value. *Thermopane* gives houses more appeal; moves houses faster at better prices.

The secret lies in using standard sash that will take standard sizes of *Thermopane* and in simplified installation. Windows in the houses illustrated above are panel windows—assembled from pre-cut and fitted 2 x 6's. Panel windows can be 1, 2, 3 or 4 lights wide and 1, 2 or 3 lights high. Units may consist of single or multiple lights for use throughout the house.

In some parts of the country you can buy panel windows from pre-fabricators, bundled for shipment to the site. Or they can be cut and rabbeted by a millwork supplier, or the contractor. Glass sizes are $45\frac{1}{2}''$ x $25\frac{1}{2}''$ for fixed lights and $42\frac{1}{2}''$ x $22\frac{1}{2}''$ for ventilators—in low-cost *Thermopane* of DSA window glass.

Your Libbey-Owens-Ford Glass Distributor can tell you more about it—and give you information on other types of sash for standard *Thermopane* sizes. And if you want detail sheets showing how to install panel windows with *Thermopane*, mail the handy coupon below.



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Please send me complete information on installation methods for low-cost window walls of *Thermopane*.

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THIS HOUSE with its interesting grouping of levels and retaining wall nestles snugly into the side of hill

A Small House with a Large Look

Builder
Todd Building Co.,
Roseburg, Ore.
Designer
L. W. Tyler,
Roseburg, Ore.

A COMBINATION of split-level floor plan, a hillside site, and a prominent retaining wall and rail, adds up to an effective arrangement and exterior design in this house.

The unit contains 1156 square feet on the first floor with 558 square feet in the basement which is used as the garage. Doors to this garage are at grade level.

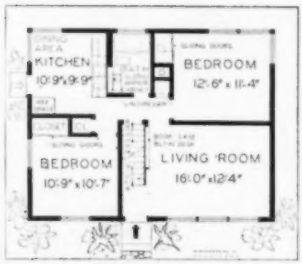
In the plan layout, the floors of the living-dining room and kitchen are placed two steps above the grade line at the retaining wall level with the bedroom area three steps above the normal first floor. The area under the living room is a crawl space with foundation vents at grade. The garage is under the bedroom wing.

Exterior facing is Alaska yellow cedar with a light brown stain and two coats of oil. Walls are of frame construction capped with a built-up roof carrying wide overhanging eaves. Windows are fixed and hinged with custom milled frames. The house is priced to sell at $22,000.

FIRST FLOOR PLAN

BRAND NAME PRODUCTS USED

- Fiberglas insulation
- Hall-Mack bathroom accessories
- Kohler plumbing fixtures
- National water heater
- Nu Tone chimes
- Pryne ventilating fans
- Schlage hardware
- Stanley garage hardware
- Wesex electric heaters



GOOD ROOM CIRCULATION, is one of the features of this low-priced house

HOUSES in Stackler & Frank's Woodbury Gardens project were designed by Alwin Cassens

MORE STORAGE SPACE is obtainable with this ingenious medicine cabinet

BUILT-IN bookcase and dropleaf desk add to the salability of the house

EACH BEDROOM has floor-to-ceiling, double sliding-door wardrobes

638 Square Foot House Selling for $8,890

Builder
Stackler & Frank,
Hempstead, L. I., New York

REPEATED and persistent demand for the building industry to supply low and medium priced housing inspired this building firm to develop a unit to sell for less than $10,000. These houses in Stackler and Frank's new Woodbury Garden subdivision, located in Hicksville, New York, have many features usually not found in this low price range.

Simplification of design, and the use of various labor saving techniques, lowered costs to $8,890 and $9,390 for a two bedroom, 638 square foot house, with a basement. Spray painting, highly mechanized on-site construction, and the use of a prefabricated chimney were a few of the labor and material saving factors. The spray painting is the newly patented Plextone process that applies as many as six colors at once. Each color retains its identity in a multitone spatter finish.

Seven elevations are available with a wide variety of color combinations to give a custom appearance to the mass produced houses. Wood shingles, bevel siding, and vertical siding are normal structural changes for the various elevations. Flower boxes and shutters are installed on each house. Other exterior treatments such as brick fronts and bay windows cost extra.

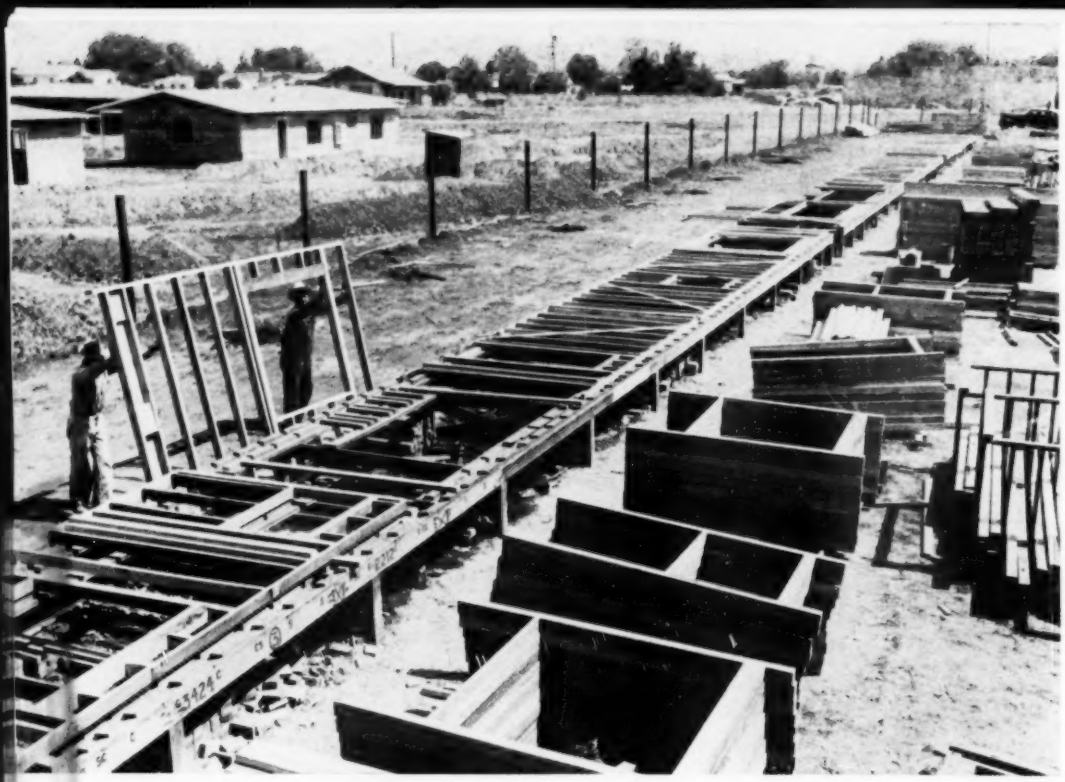
Interior design is highlighted by good room circulation with convenient entrances from the kitchen to the other rooms. The front bedroom may be used as a dining room. An attic can be completed to provide two more bedrooms.

The house features many built-ins. A large bookcase and desk are built into the side of the stairway to the expansible attic. The bath has an extra large 48x55x6 inch medicine cabinet equipped with sliding doors. The mirror is flanked on both sides by the sliding doors. The hall linen closet has a mirrored door and three drawers beneath for the storage of blankets. Wardrobe closets in the bedrooms have floor to ceiling sliding doors. The kitchen wall cabinets also have horizontal sliding doors.

Gas is the fuel used for the 67,500 Btu forced warm air furnace and the 30-gallon hot water heater. Other appliances included in the sales price are a gas stove and a ventilating fan.

Shoulder height windows are used throughout the house with the exception of the living room picture window. All window frames are aluminum with horizontal sliding glass. The fixed glass is the insulated type.

As a gesture of good will and the assurance that the builder followed the code of ethics of the Long Island Home Builders Institute and of the National Association of Home Builders, each purchaser is given a pair of silver finish "Keys to Happiness" bearing the insignia of the NAHB.



FRAMING JIGS make fabrication of house parts easy and fast

High Efficiency Brings Low Costs on This Job

Builder and Developer
Tilson Construction Co.
San Jose, Calif.

Designer
Oliver W. Upton
Saratoga, Calif.

Two bedroom units totaling 819 square feet in area completed by California firm for $6,995

MONTEREY MANOR, SANTA CLARA VALLEY, CALIF. CONSISTS OF

235-house subdivision
Ranch-type, 2-bedroom
819 sq. ft. floor area
75x125 ft. landscaped lots
Price: $6,995 per unit

ORGANIZING know-how and an efficient jig enabled two California contractors to place a 235-house subdivision on the market for $6,995 per unit, including the lot. These are ranch-type, 2-bedroom homes with 819 square feet of floor area on landscaped lots 75x125 feet and larger. There's a choice of 10 attractive elevations, all with low roofs and horizontal lines that make the houses seem larger.

The development is Monterey Manor in the Santa Clara Valley near San Jose. Builders and owners are L. J. Tilson and his partner, Philip S. Sanfilippo of the Tilson Construction Company in San Jose. This is the fourth (and largest) moderately-priced subdivision they have built in the Valley in the past three years. They have also built a reputation for giving outstanding house value by trimming construction costs to a new low and accepting only a modest profit for themselves. The entire subdivision was sold a week after it opened in September, and there's a sizeable waiting list for any turn-backs where a buyer's credit may not prove satisfactory.

The same compact floor plan was used for all the houses, except that every other one is reversed so that garages and bedrooms are always op-

posite each other, and driveways are well away from bedroom windows. There are two roof styles: hip and gable; and four exterior treatments: all stucco, stucco with pre-stained cedar shingles; stucco with rustic redwood; and stucco in two colors separated by a water table underneath the windows. Footings for outside and inside load-bearing walls go down 18 inches to 30 inches. There are no basements. The reinforced concrete slab floors, finished with asphalt tile, are laid on 2 ply 15# felt mopped with hot tar between layers and over the entire surface.

The precision jig, 245 feet long, covered all wall sections for the house, whether regular or reversed. The floor plan was designed expressly for a jig, and the jig was designed for the house, said Mr. Sanfilippo.

"You can't work every section out on a jig," he continued. "When you get into an intricate wall with a lot of short sections, you can't build it on a jig and have it come out right. For instance, we don't try to jig up our closets. They take only three or four studs, and it's simpler to send them out to the site."

These homes were plastered throughout, with vermiculite plaster ⅜ inch thick on gypsum lath. Here, again, efficient operation was the key. John H. Wolf, San Jose's largest plastering contractor, used the E-Z-On plaster pump, mounting it and a plaster mixer on a truck bed large enough to accommodate, as well, a working supply of vermiculite aggregate, gypsum plaster, and water. The pump was placed on a lower level than the mixer and immediately behind it, so the mixer could discharge directly into the pump's hopper. As the truck was driven from house to house, one hod carrier put up and moved scaffolding; one man mixed plaster; the nozzle man sprayed on the mix, and three journeymen followed, darbying, straightening, and cutting angles. The sand finish coat, ⅛ inch thick, was applied the following day. With this method, Mr. Wolf plastered as many as six houses a day—about 312 yards to the house. He also did all exterior stucco work.

CONSTRUCTION SCHEDULE
(Four Houses A Day)

1ST DAY
Floor area graded and footings dug.

2ND DAY
Gravel fill placed over floor area and soaked to compact surface.

3RD DAY
Forms for concrete work put in.

4TH DAY
Reinforced concrete floor slab and footings placed in one monolithic pour. One-half inch deformed steel reinforcing bars in footings and on 2-foot centers in floor slab. Slab placed over two layers of 15-pound felt, mopped with hot tar between, and a thick layer of tar over entire surface. Joints and openings for rough plumbing sealed. First FHA inspection.

5TH DAY
House laid out and redwood mud-sills bolted to foundations.

6TH DAY
Wall sections from jig erected and nailed down in 40 minutes by three carpenters and one laborer. It took 15 man hours to make these on the jig. They were hauled out the previous day and placed alongside the slab to be ready to install the next morning. Double 2x4 plate nailed to studding. Fire block put in. Steel window sash set into wood framing. Total net time from saw shed to double plate; 25 man-hours.

7TH DAY
Rafter crew installs 2x6 ceiling joists, 2x4 rafters, and frieze blocks.

8TH DAY
Sheathing and roofing applied. Outside carpenter work completed; window glass installed.

9TH DAY
Gutters installed. Paper-backed wire mesh applied to exterior for stucco.

10TH DAY
County inspection. Extremely rigid restrictions prevail.

11TH DAY
Electrical work installed and inspected. Second FHA inspection.

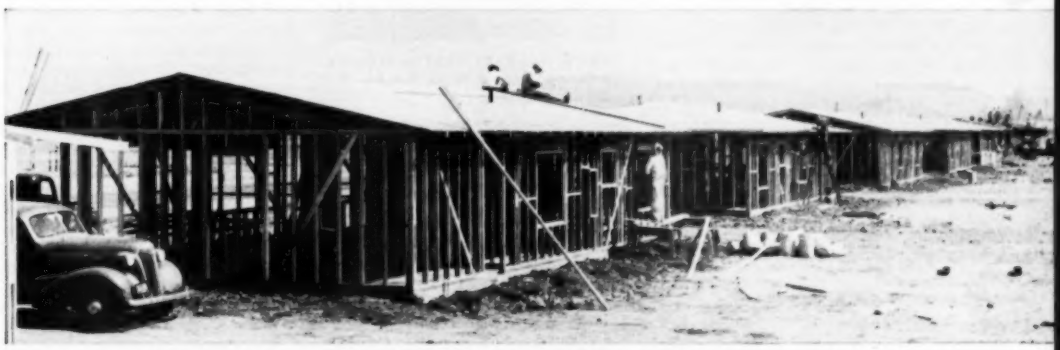
12TH DAY
Inside lathing done. House turned over to plastering contractor for plaster and stucco. Three or four days required for drying plaster. House then turned over to finish carpenter and painter. In the meantime the painter had painted the outside overhang and primed window casings.

Other special features of Monterey Manor homes include first grade lumber, 3-ply tar-and-gravel built-up roofs, galvanized gutters and metal downspouts, attic insulation, picture and casement windows, steel sash, copper screens, quality hardware, and an attached garage, 13 feet 6 inches by 21 feet 6 inches, with a concrete floor, upward-acting door, and separate rear entrance and concrete stoop. With the home go a 35,000 Btu dual wall furnace, 20 gallon hot water heater, built-in laundry and bath tubs, wood kitchen cabinets, a built-in ironing board, and mirrored medicine cabinet.

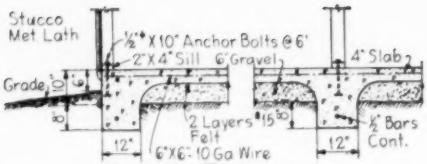
Each side of the jig was plainly marked in painted letters, showing exactly where each piece of pre-cut lumber was to go. All the men had to do was drop the right piece (stud or plate) into the proper slot, and nail it up. This is all end-nailing to make a sturdier building. Outside wall sections were run all the way around first, and their window sections kept together. Inside walls were handled the same way with all door sections kept together. Door and window framing for the steel sash was assembled on nailing tables beside the jig. As it came off the jig, each section was marked numerically to show where it would go on the site.

Only the partition and corner posts were affected when the house was reversed. The jig was so worked out that a third bedroom could be added merely by using the second bedroom sections, and making the house L-shaped.

The rectangular working and storage area was organized with assembly-line efficiency. To avoid costly delays, material for all 235 houses was on hand before building ever started; and it was so stored that

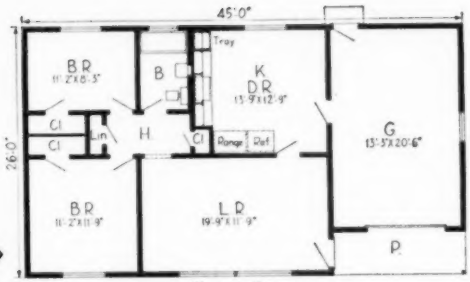


SPECIALIZED WORKING CREWS of four members each move from house to house, one man in each crew acted as its foreman



TYPICAL FOOTINGS

FLOOR SLAB section, showing anchor bolts and redwood sill



FLOOR PLAN

IDENTICAL COMPACT FLOOR PLAN was used for all Monterey Manor houses. Every other unit was reversed so that garages and bedrooms were always at opposite ends of adjacent houses. Further variation was achieved with color and material

nothing had to be moved any distance. Rough lumber was stacked close to three power saws directly opposite the nailing tables and the jig. The molding rack was placed at the head end of the jig. Everything in the yard, as well as out on the track, was on a 4-day supply basis, so there were no surface pilings.

Materials that required cover were stored in two warehouses near the construction office overlooking the saws and jig. Windows were stored in back of one warehouse; rustic storage, molding, and sheathing that needed no cutting on the saws was placed opposite the warehouses. The maintenance and service section for equipment was near the working area.

The operation was highly mechanized. Straddle and fork lift trucks moved materials. Trucks and trailers took the prefabbed sections out to the site. Construction proceeded so rapidly that temporary power poles were not used. Instead, seven generators on wheels were moved about as needed. A motor cycle and a jeepster were used to get around the 75-acre project.

"You start with the premise that labor costs today are very high," Mr. Sanfilippo commented. "So, you aim for efficiency to get more work done, and done more easily. That's where we can save most."

Although a certain amount of time was inevitably lost waiting for inspection, the work itself proceeded with a minimum amount of confusion and delay. The men were organized into specialized crews of 4 members, one man acting as that crew's working foreman. This not only centered responsibility for the crew's work as a whole, but developed a friendly spirit of competition.

The partners divided their own time with the same efficiency. Mr. Tilson took care of procurement of materials and office, finance, and promotion details. With his accurate cost accounting system, he could tell

at any given time exactly what each home had cost. Mr. Tilson has the knack of organizing and pursuing a project to successful completion. He learned the building game the hard way. In the middle of his first venture, building material prices went sky high. As a result, the cost of the

BUILT-IN LAUNDRY TRAY and ironing board are features in addition to the modern cabinets

homes was much greater than the sale price. Instead of throwing in the sponge, however, he devised methods and designs for combating the swift rise of building costs, and successfully built another tract of homes which overcame the deficit on the previous ones. All bills were paid, and his subcontractors and suppliers were assured that he was the "basket" in which they could put their "eggs." Tilson Construction Company's subcontractors are now the largest in their respective fields because of this alliance.

Mr. Sanfilippo stayed at the site, seeing that work kept to daily schedule.

"If a man didn't come to work, we arranged things so we wouldn't fall behind," he said. "Each subcontractor had to get out a definite amount of work each day so that those who followed wouldn't be held up. If a sub started to get behind, he heard about it before noon; otherwise, it would have destroyed our whole system. Of course, we all know each other. We've 'grown up' together."

"Phil was cut out to be an employer," one subcontractor commented. "He has a law degree, knows people from his military experience, and knows how to co-ordinate construction work and make it easier. He's exacting, but very fair. The men like to work for him. All Tilson Construction has to do is to announce that they're starting up again, and the men come in. Their houses are designed so the subcontractor comes out right; and if we have trouble meeting our payroll, they see to it that we get any money we need. On every Tilson subdivision, the subcontractors, themselves, bought a house or two, so you know what they think of the quality."

Streets are paved from curb to curb. There are no dirt strips; driveways, too, are concrete paved. Landscaping and backyard fence (no fences in front) are in before the houses are occupied.

"Lawns are very important in developing a beautiful subdivision," Mr. Sanfilippo said, "so a lawn is planted in front of every house. A green setting adds enormously to a tract. If you wait for the buyer to put in a lawn, an unsightly tract will result. There are always some people who plan to put in a lawn 'manana.'"

Other Tilson subdivisions are Loree Estates, 215 homes; El Quito Park, 228, and Monte Linda, 91.

PLEASANT DESIGN plus interesting combinations of materials give this house good site adaptation

ROMAN ROUGH BRICKS and vertical louvers make an interesting room division between entry hall and living room, below

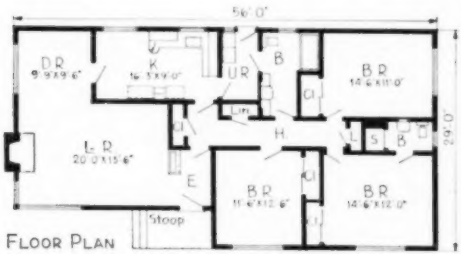
Materials and Design that Blend with Site

Builder
Dame Construction Co.
Orinda, Calif.
Designer
Vale Wright
Oakland, Calif.

A PLEASING treatment of the exterior is evident in the interesting combination of brick, wood siding and stucco used in this California house and garage which blend unusually well with the site. The siding is painted a dark brown and shutters are yellow. The modern styled porch is built of 4x4-inch posts and 2x6-inch railings.

An attractive planter in the front entry has a wood screen extending to the ceiling above it. The planting box is made of Roman brick with stacked joints. The wood screen consists of 1⅜-inch stock about five inches wide with rounded corners. The planter and wood screen together form a division between the entry and the living room.

The interior of the house is gypsum board with several different surface treatments. The living room ceiling is rough finished with painted and papered walls. The kitchen ceiling has a smooth enameled surface. The 1494 square foot house sells for $22,000 including garage and lot. It was built by the Dame Construction Company, and is in the Morga del Rey subdivision in the San Francisco Bay area near Orinda, California.

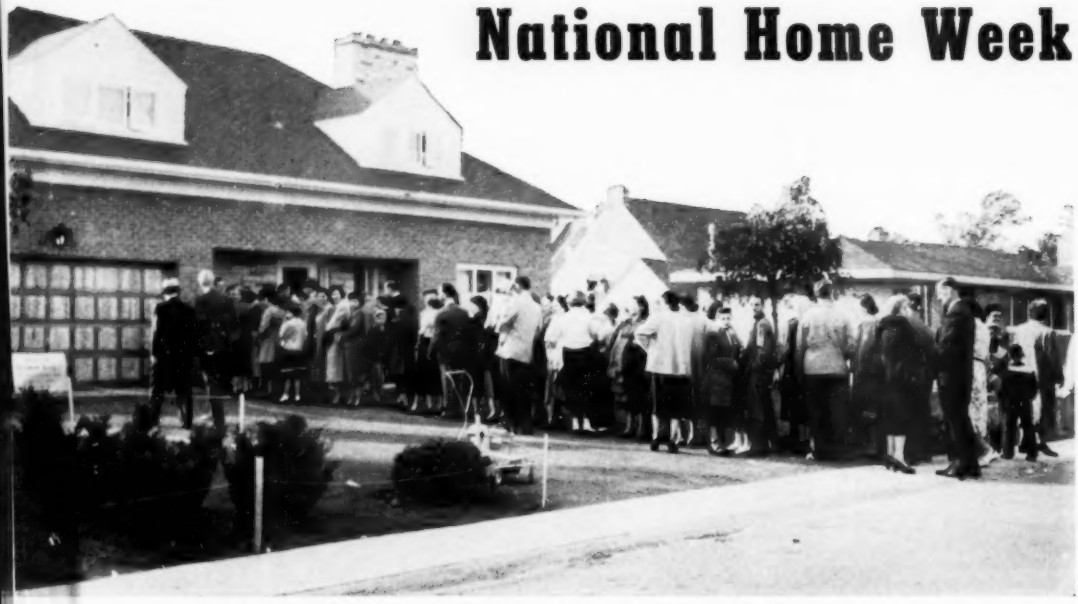


FLOOR PLAN

TWO BATHS and ample closets are included in the plan

KITCHEN features a breakfast nook, clay tile counter top

National Home Week



CROWDS LIKE THIS throughout Chicago area added up to more than 1,300,000 visitors at Festival homes

• SECTION No. 1 OF 4 SECTIONS IN CHICAGO TRIBUNE'S SPECIAL "FESTIVAL" EDITION. THE 4 SECTIONS CONTAINED 46 PAGES.

Chicagoland Home and Home Furnishings Festival

Chicago Sunday Tribune

FIFTH ANNUAL FESTIVAL OPENS TODAY

OPENING PAGE of Tribune's Festival supplement (Sunday, September 16) was in color. Sunday circulation, 1,450,000

• SECTION NO. 3 OF TRIBUNE EDITION

Chicagoland Home and Home Furnishings Festival

COLOR DRAWINGS of exhibit homes, with addresses and builders' names. Locations are pinpointed by number on map

In Chicago...

1,300,000 People Visit 86 Display Houses

Chicago observance of Week differs slightly in timing and detail but objective is the same—promotion of home sales. During 1951 event, participants sold 960

A MAJOR role in the 1951 Chicagoland Home and Home Furnishings Festival, which drew more than 1,300,000 visitors to 86 demonstration homes, earned the Chicago Metropolitan Home Builders Association an honorable mention in Group I (more than 250 members) of *American Builder's* National Home Week Contest. The association received an award at the January convention of the National Association of Home Builders in Chicago.

This was the fifth outstandingly successful annual Festival, the Chicago version of National Home Week.

Organization and timing of the event is somewhat different from Home Week in most cities. Sponsor is the Home and Home Furnishings Council of Chicagoland, of which the home builders association—since its members build most of the houses—is one of the most active components. In all, 16 groups make up the council, representing every major industry which has the home as a focal point.

Dates in 1951 were September 16 through October 7, which covered four Sundays.

Of prime importance to the Home Festival's success has been the powerful promotional support of the co-sponsor, the Chicago Tribune. The multi-million attendance is a tribute to the Tribune's pre-opening build-up and sustained publicity.

Always an outstanding piece of promotional work, this year's opening Sunday Festival edition of the Tribune contained four sections totaling 46 pages. On the first page of one of the sections were artist's sketches of each of all model homes and a map of the Chicago area designating the location of each.

Also featured editorially in the special edition were furnishings, building materials, appliances, television and other items. Advertising was heavy, including that for homes.

In addition to news items, the Tribune ran considerable promotional advertising on the exhibit homes, including two full-page insertions. The ads contained builders' names and locations of homes.

On the merchandising side, the tally was 960 homes sold by participating builders during the Festival. Of the 86 exhibit houses, 32 were furnished. Members of the Chicago association built 75 of these homes.

Breakdown of price ranges listed was: $9,000 to $12,000, 9 houses; $12,000 to $15,000, 11; $15,000 to $20,000, 18; $20,000 to $25,000, 10; $25,000 to $40,000, 10; and one each at $45,000, $45,500, $49,500, $50,000, $71,500 and $75,000.

HOME AND HOME FURNISHINGS COUNCIL OF CHICAGOLAND MEMBERS

The American Furniture Mart
Chicago Floor-Covering Association
Chicago Furniture Manufacturers Association
Chicago Retail Furniture Association
Chicago Retail Merchants Association
Electric Association
Furniture Fabric Men's Association
Lamp Manufacturers Association
Manufacturers Agents Club
The Merchandise Mart
Chicago Metropolitan Home Builders Association
National Association of Bedding Manufacturers
National Association of Music Merchants, Inc.
National Retail Furniture Association
The People's Gas Light and Coke Co.
The State Street Council

CHICAGOLAND
HOME AND
HOME FURNISHINGS
Festival

SEPTEMBER 16 to OCTOBER 7, 1951

- Builders Participating 75
- Model Homes Exhibited 86
- Model Homes Fully Furnished 32
- Estimated Number of Visitors . . 1,300,000
- Number of Homes Sold by Participants During Festival . . . 960

Sponsored by
CHICAGO TRIBUNE AND CHICAGOLAND HOME AND FURNISHINGS COUNCIL
Edmund C. Mahoney
President - Chicago Metropolitan Home Builders Assn
FESTIVAL CHAIRMAN

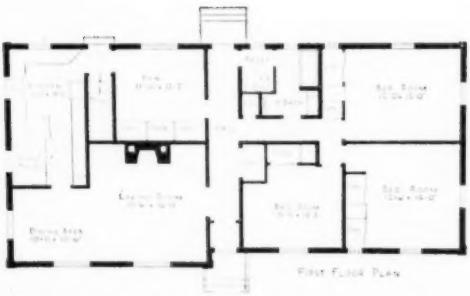
WHITE-PAINTED walls with red asbestos cement roof and red shutters spark exterior of this Elkhart, Indiana, tilt-up concrete home

Case History of a Concrete Tilt-Up House

By Earle L. Kent

Builder
Donald Goshorn,
Elkhart, Ind.

Designer
Earle L. Kent,
Elkhart, Ind.



FEATURES OF PLAN include a definite separation of living and sleeping areas and front entry without using living room

THE fact that I just completed building my own house—with the valuable, yes, indispensable help of a contractor friend—isn't too unusual. The unusual part is the way I built it, the reasons for selecting the method of construction, the problems I ran into while the work was underway, and finally, an appraisal of the completed job now that the house is finished.

My background and technical knowledge are definitely not in the structural field. I'm an electrical engineer, but all my life I've wanted to build my own home with my own hands. It became almost an obsession with me. I knew it would be a large order for an architect or a contractor, but for me to tackle it seemed like colossal impertinence.

Yet I did tackle it—with the help of my family and my contractor friend, Donald Goshorn of Elkhart, Indiana. It's all over now and I'm gratified with the results. But to say merely that I became acquainted with the problems which the builder must meet and solve every day would be the understatement of the year. I wrestled with them day after day, and I came out of my building experience with a much healthier understanding of the builder and his problems.

I also came out with some definite impressions about tilt-up construction, which is what we used to build our 6-room house with attached 2-car garage and full basement. The use of tilt-up in constructing individual homes is new and novel enough that my experience with it—even on an amateur level—may offer some new ideas and open some new fields for professional builders.

The process of selecting tilt-up for my home really

began before tilt-up was known. It all started with a course in architectural drawing which I took in high school and a lab class on Strength of Materials at college. Some of these lab sessions, I recall, dealt with tests on concrete. From these findings it seemed to me that a house could be built that combined such "practical" things as low maintenance and heating costs, sturdy construction and fire safety with the more esthetic advantage of beauty.

After examining dozens of house plan books and taking an architectural tour of northern Indiana, my wife and I turned the whole home-building idea over in our minds very carefully. She decided she preferred brick construction on the basis of its general appearance. I felt that there ought to be a less costly way of achieving the advantages of brick construction, and at the same time arrive at an even stronger wall.

A brief inquiry into concrete masonry and cast-in-place concrete led me to wonder why it wouldn't be possible to construct our own tilt-up home. I liked the basic structural idea of the tilt-up process, and any lingering doubts I had about tilt-up were dispelled when I read a set of informative bulletins on the subject. I was surprised to find that tilt-up was not only practical, but had been used in residential building in some areas of the United States since 1924. In fact, tilt-up was used even before that in some isolated cases of American home construction.

Next, we asked our contractor friend what he thought of tilt-up. He was convinced that the cost of building tilt-up walls would be "considerably less" than for other types of residential construction. He liked the way the walls could be built flat on the house floor, resulting in less form work and easier placement of the reinforcing steel in the walls.

My wife listened to all this without being too impressed, so I thought I had better contribute a few more facts about tilt-up. When I mentioned that the texture and color of the exterior walls could be exactly what she wanted, and that a reinforced concrete wall would stand up to a western Kansas cyclone any day of the week, she was "sold."

I didn't want to move ahead too fast, however. I had little or no knowledge of structural engineering and design. This meant that I had to burn plenty of midnight oil studying the mysteries of wall construction. Luckily I was able to come up with some fairly good calculations on the structural details of our proposed house.

Although tilt-up seemed to be a relatively uncomplicated method of construction, we decided to build our garage first as a "shake down" venture to provide us with structural details and improve our operational methods.

Work began in early June, 1949. The first wall we raised was one entire side of the garage. It was a good-sized panel measuring 9x19 feet. Although it weighed more than four tons, we had no trouble in tilting it to an upright position in exactly the desired location by means of a hand winch mounted on a special derrick or gin pole.

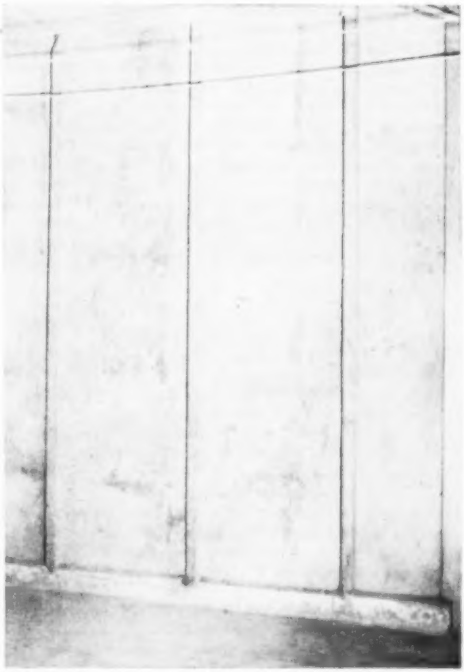
In the meantime the basement excavation for the house was completed and footings were placed, followed by the basement floor. Once this concrete had been cured properly, the basement walls were placed in forms built flat on the basement floor. These walls were four inches thick with 2x2-inch ribs running vertically every two feet. Pockets were left for floor joists and a ledge for the ground floor of the house.

The basement walls, its interior partitions (the basement is divided into eight rooms), and the remaining garage walls were all placed about the same time, cured for five days and then tilted up into position. After

CONSTRUCTION COSTS

*1. LABOR	$7,457.11	
Taxes and Insurance on Labor	280.01	
		$7,737.12
2. MATERIALS		
Steel (reinforcing, junior beams, form pans and heating ducts)	853.62	
Portland cement, sand and gravel	912.76	
Lumber (roofing felt, doors, insulation and nails)	3,885.37	
Glass, aluminum sash	866.52	
Asbestos cement shingles	433.85	
Paint and wallpaper	383.79	
Brick, flue liner and flashing	231.64	
Door hardware	214.39	
Misc. materials (fireplace units and screens, marble trim, sewer connections, asbestos paper and pastel)	304.27	
		$8,086.21
3. OTHER COSTS (Material plus Labor)		
Plumbing and heating fixtures	1,818.74	
Wiring and fixtures	1,166.17	
Floor tile and bath tile	1,523.40	
Breakfast nook	200.00	
Misc. expenses, contractor, etc.	596.00	
		$5,304.31
TOTAL COST:		$21,127.64

*NOTE: Labor does not include time spent by Mrs. Kent, my father or myself.



DETAIL of tilt-up exterior wall of basement. Thickness is four inches, with 2x2-inch ribs running vertically every two feet

temporary bracing of the panels, concrete for the corners and other joints were cast in place.

When the basement walls were erected, steel junior beams were laid for floor joists. An asphalt-cork mixture was placed around the ends of the beams in the pockets on the outside walls for insulation.

Next, a 2-inch ground-level concrete floor was laid on the steel beams. The same pans that were used to make the ribbed wall construction were re-used as forms between beams. They were supported by boards laid between the lower flanges of the I-beams. This formed a rib around the top flange of the beam.

It was on this ground-level floor that the main exterior walls were cast. When the floor had cured properly, it was covered temporarily with the same metal pans, which were spread on the floor slab to prevent bond between floor and wall panel. Then we laid out edge forms of 2x6 lumber. This done, we placed in position our door and window frames, reinforcing steel, insulation, electrical conduits and outlet boxes. We then placed our very carefully proportioned quality concrete into the still horizontal forms.

When the concrete was hardened and cured, our hand-operated lifting rig was attached to bolts previously set in the concrete, and the completed wall was tilted to a vertical position in a matter of minutes. As soon as one wall panel was erected, we made sure it was rigidly braced until another panel could be cast and tilted into position. Then when an adjacent wall was completed, the two walls were bonded together with cast-in-place concrete corner columns and tied securely into place with ⅜-inch horizontal steel rods extended into the corner columns and bent at an angle. The walls were bonded together at the top by cast-in-place beams which tied the whole structure tightly together.

As in the case of the garage, the house roof has a sheath of red asbestos-cement tile capping it, and this color is further carried out with red shutters all around the house. Exterior walls were given a wood float finish and painted with white portland cement paint.

All form lumber for exterior walls was re-used in ground floor partition framing. According to our figures, a total of 3,773 man-hours were put in on the entire house construction job, complete with excavation, basement and garage.

The following table gives the number of bags of portland cement we used per cubic yard of concrete:

Use	*Bags of cement per cubic yard concrete*
Footings	5½
Basement floors	6¼
First floor	6
Walls	7

Tests were made on cylinders from samples. The 7-sack concrete showed a much higher compressive strength than was necessary. In the footings, basement floors and exterior walls, the sand and gravel mix was standard. The concrete mix for the first floor used pea gravel. All floors were cast-in-place concrete.

Thermopane was used for all windows except those of the kitchen and bath. Ventilating louvers, opened from the inside by a sliding door, are provided below the Thermopane windows. These doors are insulated and are completely tight when closed.

For insulation, a 2-inch blanket of Kimsul was placed over the ribs, and 2x2 furring strips placed at each rib compressed the blanket to about ½-inch thickness. Half-inch gypsum board with aluminum foil on the outside was nailed to the strips. Between ribs the wall section is 4-inch concrete, 1-inch air space, 2-inch insulation,

PARTIAL VIEW of basement floor. After being cured, floor was used to hold forms for casting basement walls

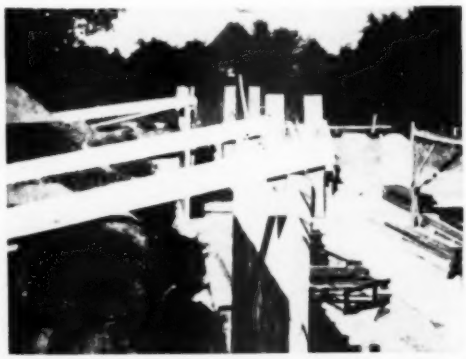
another inch of air space, aluminum foil and ½-inch of gypsum board. Dry wall construction was used throughout. This gives a heat transmission coefficient "U" of .087 Btu per square foot per hour per degree F.

The heating is handled by a combination of warm air and radiant-heated floors. Temperature distribution is very even so that no sense of draft is felt anywhere in the house. Filtered air is circulated and can be humidified or treated as desired. Air can be taken from the basement or outside in the summertime for cooling. Basement rooms are heated by ceiling radiation, and ductwork is at a minimum.

All of Mrs. Kent's "must" ideas were incorporated in our floor plans and all were translated into actuality. They included:

1. A definite separation between living and sleeping areas.
2. Front entrance without going through the living room area.
3. Plenty of closet space.
4. An all-purpose room for ironing, sewing, etc. (Den)

Now that we are living in our new home, my wife and I realize what a big job we undertook. We learned a lot of lessons, but two of them stand out head and shoulders above the rest. First is a healthy respect for the building profession and the job it is doing, cultivated by the realization that the problems we met are multiplied by the hundreds each year for the individual builder; and second is the excitement of pioneering in our locality the tilt-up method of home-building, and knowing in retrospect that we made a wise choice.



TEMPORARY BRACING of basement wall panels was followed by casting in place of concrete for corners and other joints

COMBINATION of stone and vertical siding with a change of pace in window fenestration makes an effective exterior facade

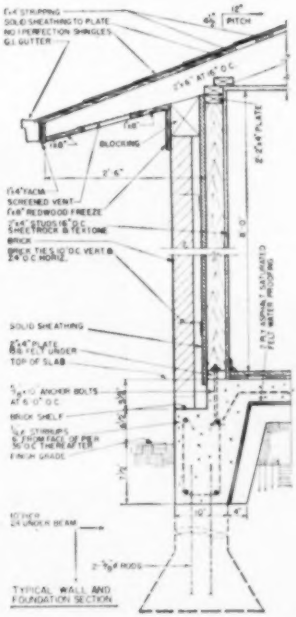
The Southwest "All Electric" House

FULL use of electric service through conveniences and features is the keynote of this Houston, Texas house. From weatherproof outlets at entrance to the electrically operated mechanism on garage doors, everything in the house is geared for the comfort of the occupants. This includes "touchplate" wiring system, all electric kitchen and laundry, year-round electric air conditioning unit for summer cooling and winter heating, a complete inter-communication system, and a built-in radio in both bathrooms, and the kitchen.

The house contains approximately 3100 square feet including garage. All rooms are on one level.

Builder
Marvin Henry,
Houston, Texas

Architect
Phillip G. Willard, A.I.A.
Houston, Texas



WALL SECTION, right, outlines the character of the construction. Note that concrete piers are spaced evenly along the periphery of house with grade beams forming the separation. Floor plan above

If you're looking for

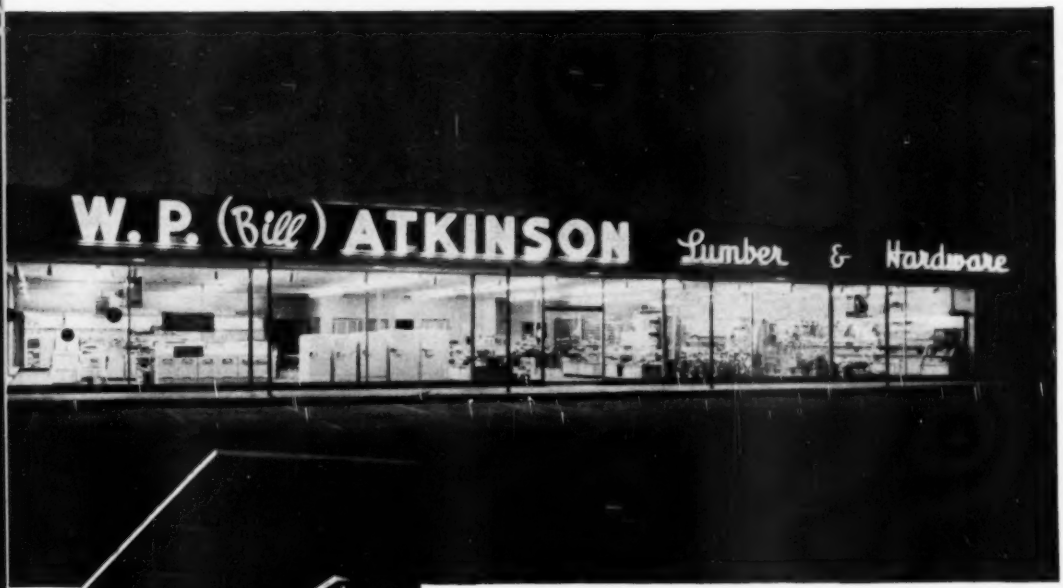
CARRARA GLASS is much in demand by homeowners. It's very popular for window sills, cabinet tops, plant shelves and other surfaces subjected to moisture and hard usage. Carrara Glass helps to give any home, in any price class, a feeling of exceptional value; makes one house stand out from others of similar style. It is waterproof, easy to keep clean with just a damp cloth. And it's available in ten attractive colors. Architect: Raymond A. Fisher, Pittsburgh, Pa.

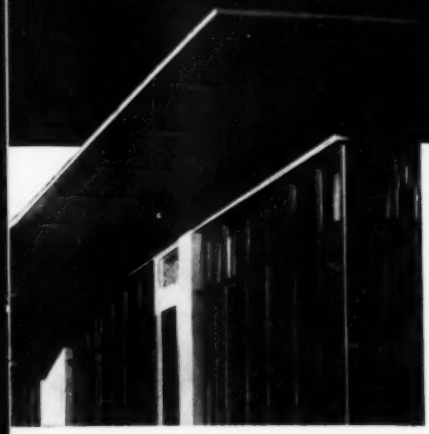
HERE is a striking combination of a Pittsburgh Structural Mirror and flanking glass shelves which will add a touch of glamour to any room—whether you are building a new home or remodeling an old one. Well-placed structural mirrors do much to bring added beauty and color to a room. They "light up" dark spots, give rooms greater apparent length or width.

TWINDOW, Pittsburgh's window with built-in insulation, is made up of two panes of Pittsburgh Polished Plate Glass, with a sealed-in air space between. Or, if reduction of heat and glare from sunlight is desired, the outer light of the Twindow unit may be Solex Heat Absorbing Plate Glass—"the best glass under the sun." Twindow's exclusive stainless steel frame makes handling easier and safer, cuts installation time.

building and remodeling ideas...

Pittsburgh Glass can help you!





THIS OPEN-VISION lumber and hardware store is an excellent example of the use of large areas of Pittsburgh Plate Glass to give greater attraction-power to fronts of all kinds. Glass can help you get more of these jobs and finish them more quickly. Be sure to tell merchants that you will be using Pittsburgh Products. Their wide acceptance will make your selling job easier. Architects: Noftsger & Lawrence, Oklahoma City, Oklahoma.

GLASS, lots of it, helps to give any home a feeling of charm and sparkle that no other material can achieve. Picture windows bring the ever-changing moods of nature into this home while the occupants are comfortably seated inside. Here, Pittsburgh Polished Plate Glass single panels have been used. Where insulation is required, Twindow is the preferred unit. And if an abundance of soft sunlight is desired, with less glare and heat, Solex Heat Absorbing Plate Glass is recommended. Designer: Jan Ruhtenberg, Colorado Springs, Colo.

Build it better with **Pittsburgh Glass**

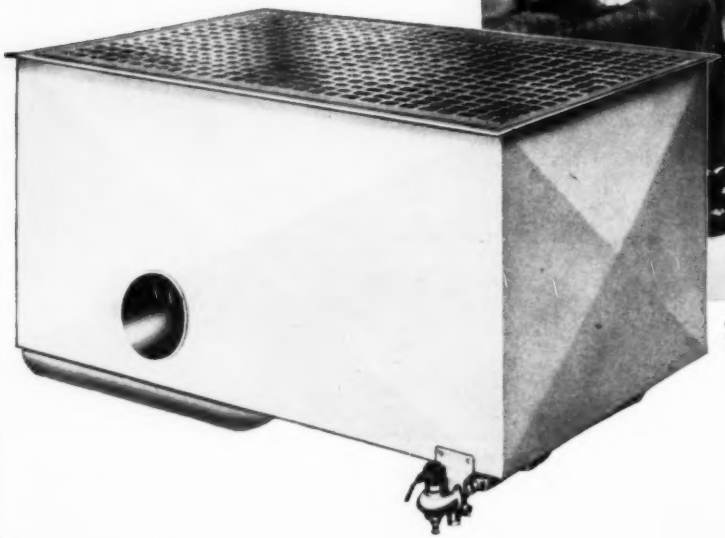
A little extra glass means a lot of extra charm and buy-appeal, regardless of the style or price range of your homes. Glass utilizes no critical materials, so use a lot of it. It will solve many of your building problems.

See Sweet's Builders' Catalog for detailed information on Pittsburgh Plate Glass Company products.

PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS

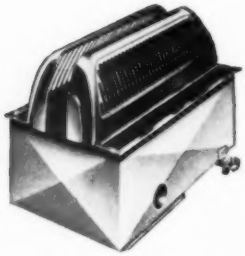
PITTSBURGH PLATE GLASS COMPANY

Give *them* the finest heating comfort and... cut *your* costs to the bone!



GAS MODELS APPROVED BY AMERICAN GAS ASSOCIATION; OIL MODELS LISTED UNDER LABEL SERVICE BY UNDERWRITERS' LABORATORIES

Coleman Floor Furnaces



Dual Wall Floor Furnace fits under the wall between two rooms, heats either or both, as desired.

There's nothing like a Coleman Floor Furnace for easy cost-saving installation! It's one complete unit, and it slips right into the floor. The "Shalloflow" Gas Model is so shallow it needs no excavations, no costly duct work, no added plumbing expenses.

For new homes, old homes . . . low-cost homes . . . homes with or without basements—Coleman Floor Furnaces provide the low-cost, automatic comfort that home-buyers want. They *automatically* circulate all the heat needed, *where* it's needed, through 3 to 5 rooms. Provide "warm floor" comfort for the children, too!

Coleman Floor Furnaces come in two types. The Flat Register Model fits flush with the floor. The Dual Wall Model has two registers, fits beneath wall or partition to heat two rooms at the same time. Models for Gas, Oil and LP-gas. For better, low-cost home construction, for the comfort of your customers, write for details today! The Coleman Company, Inc., Wichita 1, Kansas.

Coleman "know-how" and consumer acceptance of the Coleman name as a standard of quality will help you sell homes faster.

Coleman®

Comfort Costs So Little with a Coleman

SEE OUR CATALOG IN SWEETS

America's Leader in Home Heating

The Coleman Company, Inc., Dept. AB-651, Wichita 1, Kansas

Please send me information on Coleman Floor Furnaces—

☐ **Gas** ☐ **Oil** ☐ **LP-gas**

Name_____

Street_____

City_____ Zone____ State____

LOW COST HOMES THAT HAVE ALL THE FUNDAMENTALS SELL FASTER

Only Oak Flooring provides all the basic fundamentals – beauty, durability, economy and "healthfulness."

Today's low-cost home should have *all* the basic fundamentals such as "healthfulness," beauty, durability and economy. Efforts to keep costs down should be confined to size and finishing "frills" only.

The benefits of oak flooring, for instance, need not be eliminated from low-cost homes. Now, oak—which 85% of all prospective homeowners want—can be laid over concrete screeds set in mastic.* To use with this low-cost installation is a grade of oak for the lowest cost homes.

Can the children play on the floor? Sure they can, in summer or winter. The natural insulating qualities of oak flooring, plus the cushion of air between the concrete slab and the oak makes the floor warmer in winter, a big plus-factor in home sales.

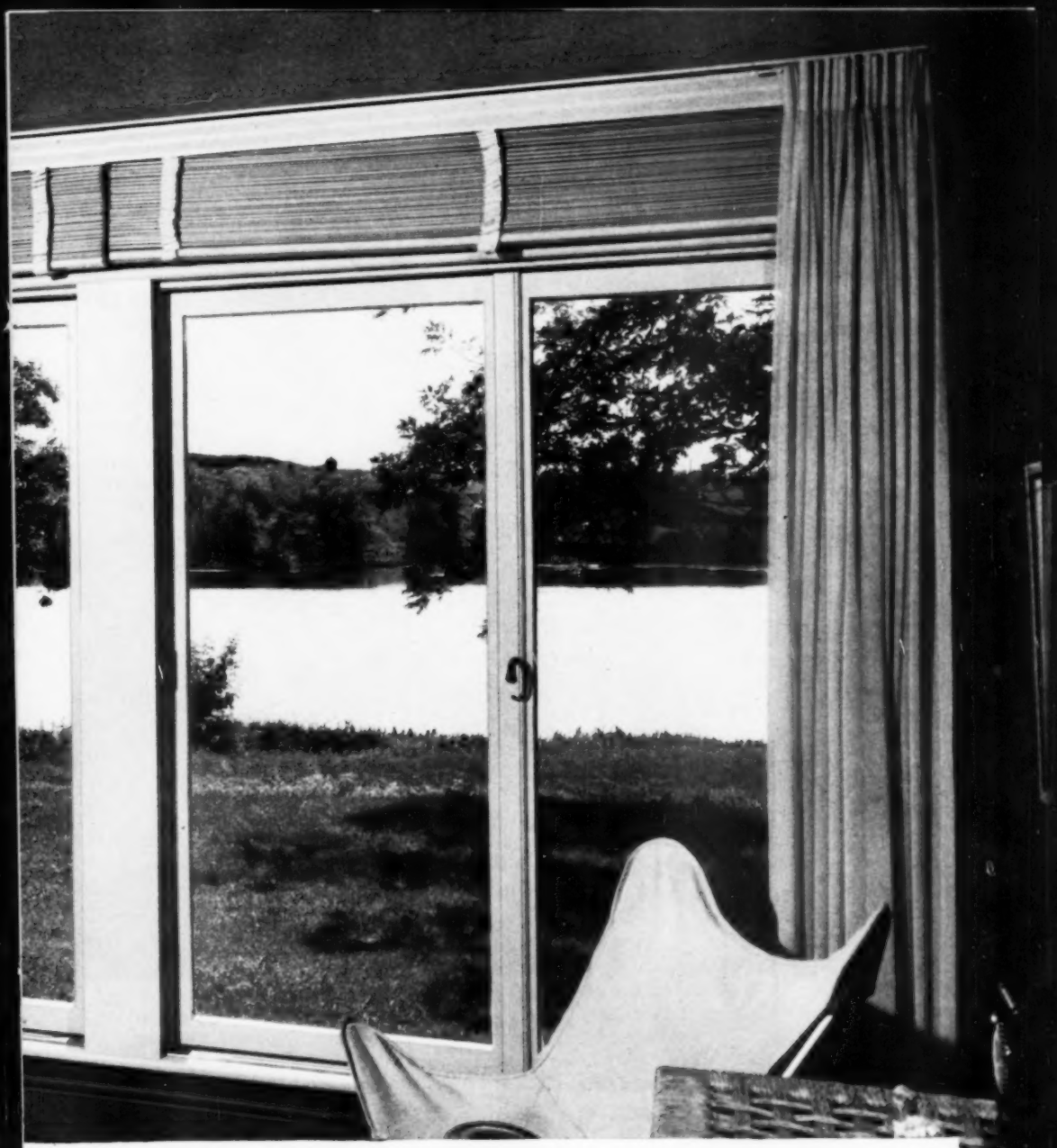
*SEND TO NATIONAL OAK FLOORING MANUFACTURERS' ASSN., STERICK BLDG., MEMPHIS 3, TENN., FOR FREE FHA-APPROVED INSTRUCTIONS FOR LAYING OAK OVER CONCRETE.

Andersen WINDOWALL *in home by Humphrey & Hardenbergh, Inc., architects*

BREEZE-CONDITIONED BEDROOM with...

ANDERSEN

*Windowalls**



CORNER WINDOWALLS add spaciousness, plenty of sunshine and a view to this bedroom during the day. At night they glide easily open, catch every breeze that stirs. Open these three Andersen Gliding Window Units, and you have 45 square feet of wall open for ventilation. Close them, and you have a highly weathertight picture wall. More than windows, more than walls, these are WINDOWALLS.

*TRADEMARK OF ANDERSEN CORPORATION

Sell Andersen WINDOWALLS For Remodeling Profits

Government regulations encourage home improvements and additions. Use WINDOWALLS for porch enclosures. For extra rooms. For dormers in unfinished attic.

Andersen Corporation • BAYPORT, MINNESOTA

FAMOUS FOR COMPLETE **WOOD** WINDOW UNITS

For specification data, see your millwork dealer, Sweet's Builders' file or write Andersen Corporation.

St. John's Hospital, Santa Monica, Calif. John W. Maloney, Seattle, Wash., Architect. Pozzo Construction Company, Contractors.

Architect John W. Maloney says:

"The Truscon line enabled us to fill every window need in the beautiful new St. John's Hospital"

Strikingly beautiful is this new St. John's Hospital in Santa Monica, California. Well-illuminated and well-ventilated with Nature's free sunlight and fresh air, because it is well-windowed with Truscon steel units. Truscon Series 46 Double-Hung Steel Windows complement the sweeping, modern architectural lines; admit ample daylight; operate easily; require an absolute minimum of maintenance. Truscon Intermediate Projected Steel Windows with dual ventilators permit ample, controlled flow of air in inclement weather. Truscon Commercial Projected Steel Windows lend flowing lines and proper ventilating facilities to the service units. Truscon Steel Screens provide economical, long-life screening. See SWEET's for complete details on the entire line of Truscon Windows for every purpose; and write for detailed literature on all other Truscon Steel Building Products. Truscon® Steel Company, 1050 Albert Street, Youngstown 1, Ohio. Warehouses and Sales Offices in Principal Cities. Subsidiary of Republic Steel Corporation.

TRUSCON MARK OF MERIT PRODUCTS

TRUSCON a name you can **build** on

more home owner appeal per square foot in a CURTIS kitchen

Curtis' long experience in kitchen planning pays off for *you* when you show a home owner what Curtis has done to make kitchen beauty more distinctive and kitchen work lighter. For these wood cabinets, so easily joined together to fit any size or shape of kitchen, can be painted any color of the owner's choice. What's more, Curtis cabinets embody a host of modern conveniences that put more kitchen appeal into every square foot of cabinet space!

There are nearly 12 cubic feet of storage space in this Curtis base corner unit—just the thing for storing large pots and pans. Notice the handy wire pan lid holder.

Plenty of room for everything in Curtis cabinets—because they are designed to provide maximum storage space. Shelves are adjustable in height.

Here's a Curtis unit every kitchen needs—a marvel of efficient storage space. Note the compartment for the mixer and ventilated vegetable drawer—Curtis cabinets are designed to reduce kitchen work.

For small kitchens, this Curtis unit with its "disappearing" table space is a *must*. The table top folds once and slides in, out of the way when not in use. Down below there's a big, roomy cabinet.

You'll want the whole story of Curtis kitchens—mail the coupon!

1866 CURTIS WOODWORK

Curtis Companies Service Bureau
AB-2 Curtis Building
Clinton, Iowa

Gentlemen: I want to know more about *Curtis wood kitchen* and *storage cabinets*. Please send your free book.

I am ( ) Contractor ( ) Architect ( ) Prospective Home Builder ( ) Student. (Please check above.)

Name.....

Address.....

City.....*State*.....

SEE THEM . . .

ON THE JOB! 280 squares!

OF HEAVY DUTY INTERLOCKING DOUBLE COVERAGE

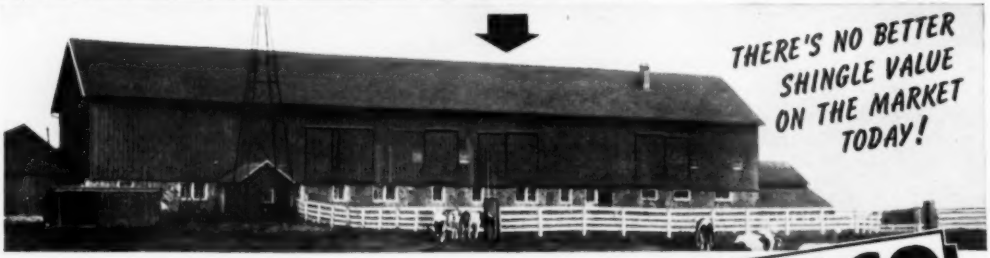
TEX-LOK

SHINGLES

SHOW THIS . . .

on-the-job evidence to your customers! Three big, mid-West dairy barns* protected against wind, weather and fire—with TEX-LOK asphalt shingles.

**Owners' names on request.*



THERE'S NO BETTER SHINGLE VALUE ON THE MARKET TODAY!

TEX-LOK shingles are available in the areas served from roofing plants located at Lockport, Illinois; Port Neches, Texas; and Port Wentworth, Georgia.

In the Northeast . . . it's

TEX-LATCH

Tex-Latch is similar to Tex-Lok except in method of locking tabs. Tex-Latch shingles are available from the Edge Moor, Delaware roofing plant.

TEXACO

Asphalt Roofing Products

THE TEXAS COMPANY

MEMBER OF THE ASPHALT ROOFING INDUSTRY BUREAU

TIME-SAVING TEAM FOR BUILDERS

STANLEY

Reg. U.S. Pat. Off.

Door-Hanging Tools

This trio of Stanley Electric Tools puts speed, efficiency into door hanging . . . puts you hours and dollars ahead on every building job.

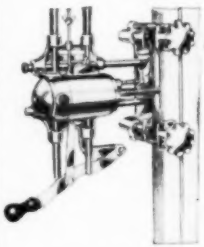
Here's how you save. Stanley Hinge Butt Router, **HB8A** mortises 6 times faster than by hand. Leaves a smooth, flat surface every time . . . provides a solid foundation for Stanley round cornered butt hinges. Stanley Door and Jamb Template **T5** makes multiple hinge mortise positioning accurate and fast in one setting. Stanley Plane Attachment, **GA-142** adds double-value and utility to **HB8A**, operates on same motor. Does a quick, flawless job of trimming and fitting doors.

Save time and money in door fitting, hinge mortising . . . add this precision team to your building crew today. For full information on these time-saving tools—see your dealer—or write to: Stanley Electric Tools, 400 Myrtle St., New Britain, Connecticut.

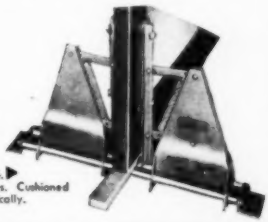
HINGE BUTT ROUTER, HB8A mortises 6 times faster than by hand. Leaves smooth surface . . . perfect fit for Round or Square Corner Hinges.

DOOR AND JAMB TEMPLATE T5. Makes hinge mortise positioning accurate and fast. Can be duplicated on as many doors as desired, for either 2 or 3 hinges.

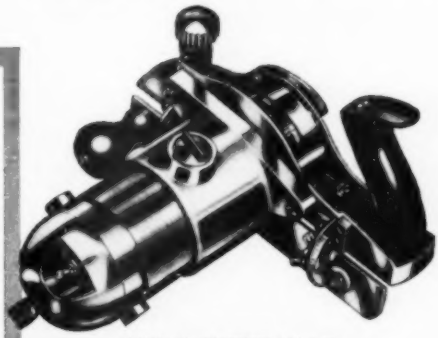
FOR PRODUCTION-LINE EFFICIENCY THESE COMPANION TOOLS . . .



◀**LOCK MORTISER, LM1.** Does a complete mortising job in about 30 seconds. Easily adjustable.



SASH AND DOOR HOLDER, GA-156.▶ Eliminates make-shift saw-horse set-ups. Cushioned clamps protect work . . . release automatically.



PLANE ATTACHMENT, GA-142
Operates on same motor as HB8A. Easily attached, gives fast, flawless trimming and cutting. Ingenious design blows chips entirely free from cutter and operator.

STANLEY

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HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

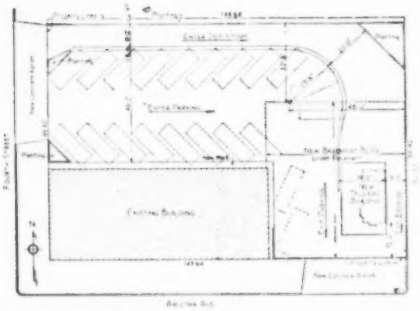
NEW TELLER'S BUILDING placed in drive to parking area has stairway to basement facilities

Vertical Expansion Retains Parking Area For Bank Customers

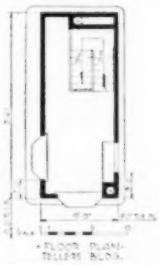
Builder
Ellis G. Martin
Santa Monica, Calif.

Architect
Edla Muir
Los Angeles, Calif.

A Santa Monica, Calif., bank had expanded business to the point where more space was an absolute necessity and expansion plans first considered use of an adjacent parking lot. Returns from a customer preference survey, however, indicated that the parking convenience was responsible for a major share of new accounts.

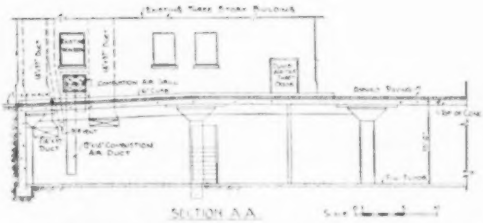


PLOT PLAN and present building



NEW teller's building

NEW basement building



SECTION through basement. Portion of old bank in background

SUN DECK adjoining the new director's room built on the roof of old bank building

The solution to the expansion problem was found by going under part of the parking area and on top of the roof of the present building. These improvements suggested a new feature to the bank's service—an auto bank.

The basement building provides an additional 3,500 square feet of working, storage area and recreational facilities for employees. An eight-inch-thick reinforced concrete slab supported by concrete beams and columns form the roof. Black top over the slab provides the surface for the parking area. The teller's building is strategically placed in drive over slab, so customers are served for either banking or parking.

The new auto banking addition has proved particularly successful. During the first three months of its operation 15,000 separate transactions were made. The building has three tellers' cages—two for motorists and the other for pedestrians.

Cost of the entire remodeling job was $125,000. Bank officials agree this is no more than it would have cost to expand laterally.

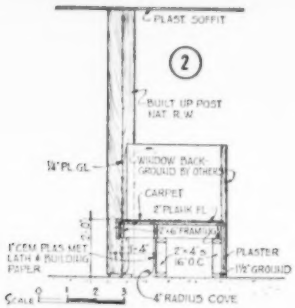
One of the striking features of the expansion job is the entrance to the lower lobby. The floor is Arizona flagstone set in six inch concrete. The stairway is Arizona flagstone and Palos Verdes rock. There is a waterfall and pool of Palos Verdes rock, embellished with ferns and greenery at the foot of the stairs. The architect says this unusual entrance "takes away the basement look."

All woodwork in the lowel level is "curly" redwood, a species with wavy grain in random planks. Ceilings are acoustical plaster. The entrance lobby has a ceiling treatment of 2x6's laid up in an eggcrate design. The recreation room is finished in knotty pine of random width.

APPROACH to safety deposit department erases the "basement look"

RECREATION ROOM in basement building is finished in knotty pine walls

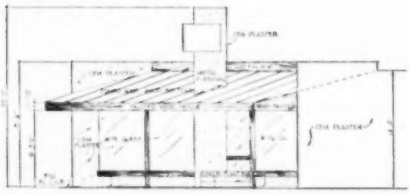
DIRECTORS' ROOM on roof is finished in black walnut, opens onto sun deck



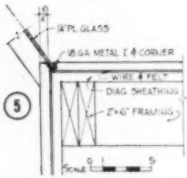
TYP. SECT. THRU BULKHEAD

Men's Store with a Two-Way Approach

Architects
Gruen and Krummeck, A.I.A.
Los Angeles, Calif.



SOUTH ELEVATION 3



SIMPLIFIED construction methods were used in connection with the store fronts

FLOOR PLAN

A SMALL men's furnishings store building in Los Angeles, Calif., has a number of unique features including two fronts designed to appeal to clientele which comes primarily from the University of California student body and faculty.

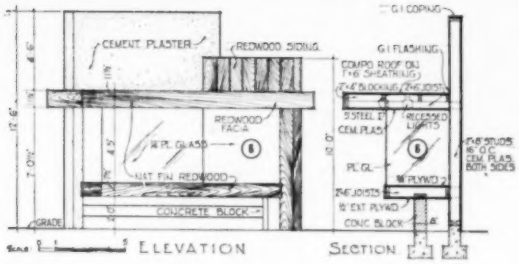
The owners had no preconceived ideas as to the type of building required. They placed themselves completely in the hands of competent architects. The result is a building that conforms to the character of the university district in which it is located, and meets requirements in regard to sales, displays and parking.

This project consists of a store building containing 2250 square feet, fronting on a high traffic street. It has a free standing show window (adjacent to parking lot entrance) on a neighborhood street with a parking lot in the area between the two structures.

Construction of the store building is wood frame on a concrete slab; composition roof; exterior finish plaster and redwood; interior finish plaster and redwood, cork floor; lighting predominantly strip except for down lights in show windows and entrances.

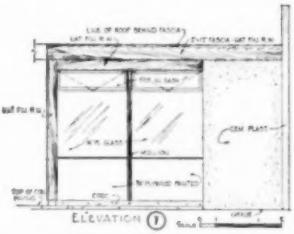
The canopy and show window ceil-

BOTH STREET FRONTS carry out the same design motif. Free standing show window is in foreground at left. Structural members are exposed in store

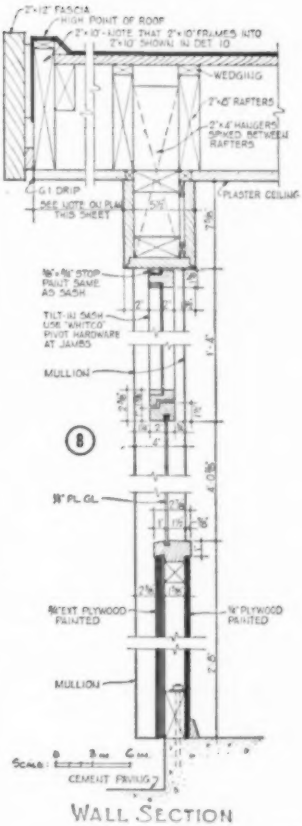


ing were purposely kept low to avoid the adverse effect of the late afternoon sun. To further support this effect, the roof structure within the store was left exposed. Because of the oblique angle of the lot, it was possible to avoid rectangular show windows. In their place triangular areas for display are provided, thus permitting a full view of the entire window from almost any angle. This also avoids dead corners. Glass is set in wood and plaster surfaces by means of recessed channels without visible metal parts.

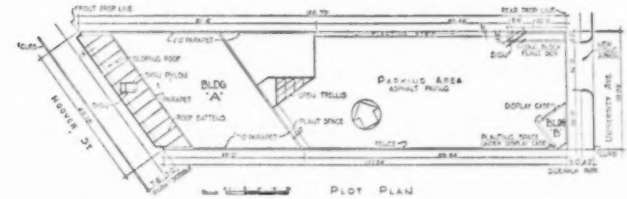
Counters and showcases as such, are entirely omitted in the store. All merchandise is arranged to be directly accessible to the customer and to invite browsing. The fixtures are executed in Douglas fir treated with a thin coat of oil stain. All other wood is redwood except for a painted entrance door. Cost of construction is $25,000.



FREE STANDING show window details and elevation of parking lot front are above. Wall section is shown at right



PLOT PLAN shows position of buildings "A" and "B" in relation to both street fronts. Parking space occupies the area between structures



Pella

WOOD CASEMENT
WINDOWS

MAKE CUSTOM WINDOW EFFECTS FROM STOCK-SIZE UNITS

Pella stock-size casement units can be combined into hundreds of custom-like effects of varying width and height. Installation cost is minimized because Pella wood casements are factory-fitted and assembled, individually packaged, ready to place in rough wall openings.

CHECK THESE CONVENIENT Pella FEATURES

ROLSCREENS — Pella casements are equipped with inconspicuous inside Rolscreens that roll up and down like window shades. Rolscreens operate with finger-tip ease. Never need painting, storing, putting up or taking down.

DUAL GLAZING AND WEATHERSTRIPPING — All Pella casements are dual glazed to insulate against winter cold and summer heat. Sash is weatherstripped on all four sides to eliminate drafts.

EASY TO OPERATE — Pella's patented hinge design and construction assure easy operation.

FIT ALL TYPES OF ARCHITECTURE — Pella casements fit snugly into wood, frame, brick, stone, brick veneer, etc. They convey dignity and stateliness to Colonial architecture . . . emphasize Cape Cod "coziness" . . . lend breadth to Modern or Ranch styles.

3-LIGHT WIDE UNIT — Only Pella builds these wide casement units, made possible through Pella's patented hinge design, superior sash construction and steel inner frame. Ventilating windows have glass sizes up to 24" wide by 60" high!

FOR FURTHER INFORMATION
See Sweet's Builder's File 17c/ROL or mail the coupon today for a complete set of Casement Details No. 1050M.

ROLSCREEN COMPANY, Dept. D-11, Pella, Iowa
Without obligation, send me "PELLA CASEMENT Installation Instructions in Full Size Casement Details No. 1050M."

Name _____

Firm _____

Address _____

City _____ State _____

PELLA CASEMENTS • ROLSCREENS • VENETIAN BLINDS

No. G-28 Display Window

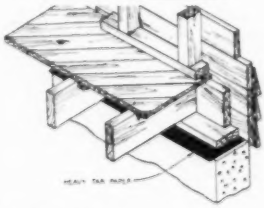
Special features in store front design, such as separate show windows, were techniques employed by this designer to create additional interest and attention in a line of merchandise that was highly competitive in this particular area.

There are many shoe stores that have the advantage of using all of the window space for the display of one type of article in particular. To offset this display advantage of the competitor, a separate show window to display shoes only was designed as a permanent part of the store front.

To have just another show window was not considered sufficient to entice business from a competitor. It had to be made interesting and attractive. To accomplish this the show window was designed as a free standing showcase supported only at the wall and on a terrazzo enclosed leg support.

Due to the fact that the case is open below the display platform, and is constructed with a glass roof, it has the effect of being projected into the street. To add further interest, the wall background is covered with Permastone in a split face finish in color to match Crab Orchard stone. Against this stone wall and separating the show display from the window directly behind, is a dividing partition of redwood in natural finish. The name of the store is repeated on the wall above the shoe display to help create the effect of a separate shoe department.

The terrazzo floor is red Verona terrazzo to harmonize with the warm colors of the stone and the redwood. The store front metal is alumilited aluminum in special break members to fit the conditions. Lighting is obtained from a double row of ceiling spots on 12-inch centers.



For Tight Job at Sill

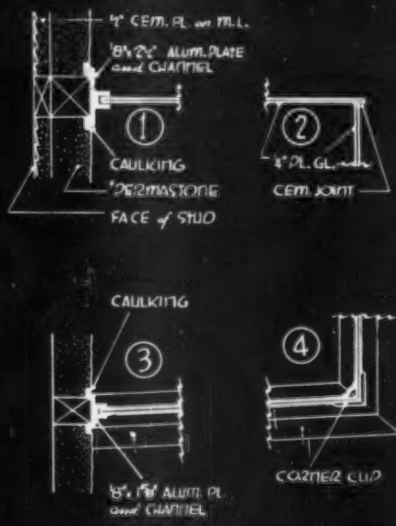
The application of a strip of heavy roofing material is a practical method for closing the gap between mud sill and concrete wall. If the area is uneven the material should be doubled to assure a tight joint.—Arthur N. Nelson, Kansas City, Mo.

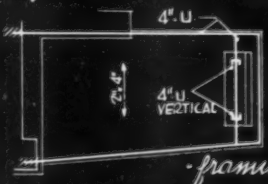
AMERICAN BUILDER'S STORE FRONT DETAILS

Designed and detailed by Louis J. Gluskin for *American Builder*

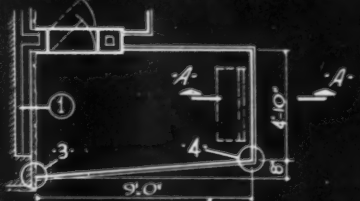
No G-28 · DISPLAY · WINDOW

·Janette· Nutley · N. J.·

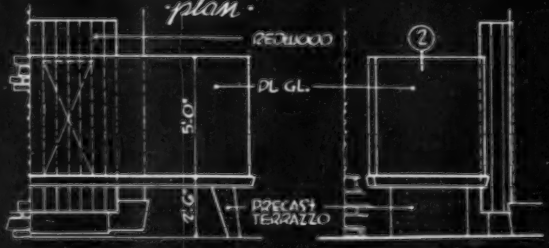




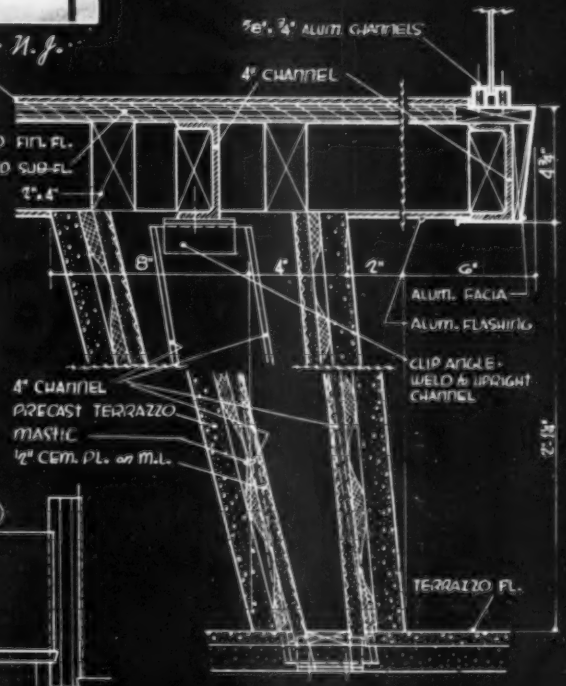
·framing plan·



·plan·



·front· ·side·



·section · A A·

Elegant Simplicity of Design

Much Faster and Easier Installation

A Long List of Exclusive Features

Engineered to Last For Many Years

4 IMPORTANT REASONS WHY SERIES "410" NATIONAL LOCKset

PATENT APPLIED

will prove more profitable to you

NATIONAL LOCKset

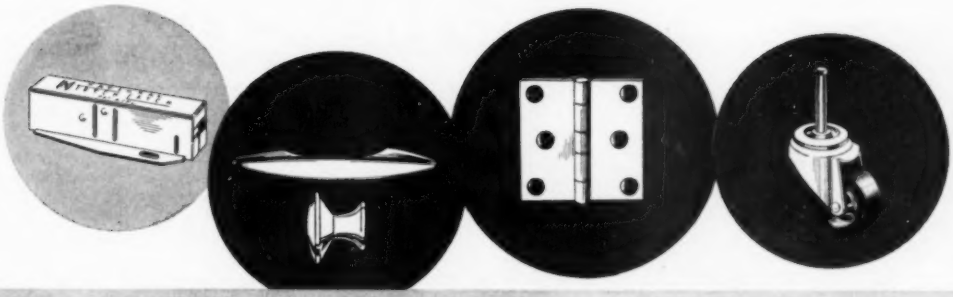
is available promptly from your regular supplier

There's extra appeal in the line of NATIONAL LOCKset key locks, turnbutton locks, privacy locks and knob latches. This has been conclusively proven by the enthusiastic acceptance of building material and hardware merchants, builders, architects and consumers. Why don't you investigate NATIONAL LOCKset today?

Distinctive Hardware...All From 1 Source

NATIONAL LOCK COMPANY

Rockford, Illinois • Merchant Sales Division



4 IMPORTANT REASONS WHY NATIONAL LOCK HARDWARE

is best to buy, sell, specify and use

National Tutch Latch

Proven popular, this fine item for use on wood cabinets opens doors automatically with gentle touch of finger, wrist, elbow or knee. Easily installed. It's hidden from external view when door is closed. Inexpensive to purchase, profitable to sell.

No. 129 Cabinet Hardware Assortment

This assortment of beautifully-styled, chromium finish cabinet hardware requires only a small investment, yet answers a big part of all normal requirements. Complete with compact counter display board to help you sell.

Builders Hardware

A broad line of quality builders hardware. Butts, hinges, sash lifts, sash locks, barrel bolts, continuous hinges . . . everything you need, available from one dependable source.

Order from Your Supplier

Ball Bearing Casters

Look to National Lock to fill your caster requirements. An extensive selection of all types is promptly available. Packaged in sturdy cartons.

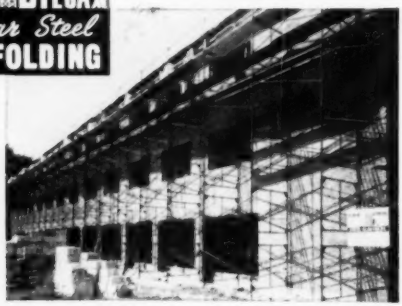
Distinctive Hardware . . . All From 1 Source

NATIONAL LOCK COMPANY

Rockford, Illinois • Merchant Sales Division

Tubular Steel SCAFFOLDING

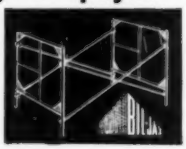
. . . is PROFITABLE on every building job!



Gets you UP *in the world . . .* FASTER SAFER EASIER

OWN or RENT . . . either way it pays!

Get the most in profit and speed in all your jobs. Bil-Jax Scaffolding is light in weight . . . is easy and fast to set up and take down . . . and is SAFE, even with heavy loads. Other Bil-Jax money-makers: swing scaffolds, rolling trestles, sectional and lean-to ladders, ladder jacks, leveling jacks, accessories.



Write for literature . . . ask for bulletin D-2

BIL · JAX · INC. · ARCHBOLD OHIO

Lux-Right IMPERIAL

The Nation's Best in Quality, Strength, Design

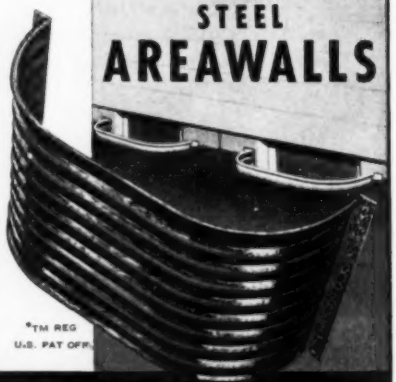
LUX-RIGHT Areawalls! Good-looking streamlined Corrugated Steel Walls for basement window wells. Hot-Dip-Galvanized AFTER forming means every edge, every surface is protected against rust. Only LUX-RIGHT gives you such complete protection.

HUG-TITE Flanges mean tight fit to the foundation.

TYPES: Streamlined-Straight and Round. Both types in wide range of sizes.

SEE your distributor or dealer, or write us for Descriptive Folder.

STEEL AREAWALLS



*TM REG U.S. PAT OFF.

SAINT PAUL CORRUGATING CO.

SOUTH END WABASHA BRIDGE *67 Years of Service* SAINT PAUL 1, MINN.

No. D-87 Window Wall

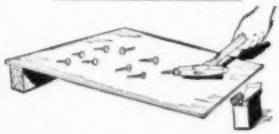
The continuous combination of sliding sash doors and large fixed glass areas, generally referred to as window walls, has increased in use in all sections of the country with the advent of the modern or contemporary styled house.

The example detailed on the opposite page indicates sections through a sliding door, fixed sash, roof construction and plank terrace. The construction of this house is somewhat unusual in that no attempt is made to cover the structural members with finished material. Note that in the roof framing the underside of the 3x6-inch roof planking is exposed as the finished ceiling in the rooms. The 4x12-inch structural beams and the 4x4-inch posts that support the roof area are also left exposed.

Another interesting feature of this construction is the 2x6-inch plank flooring for all rooms, which spans between 4x12-inch wood beams spaced 5 feet 9 inches on centers. This same flooring extends out to the terrace, but is laid with ½-inch open joint for proper drainage in this area; ¾-inch rigid insulation is secured to the underside of flooring.

All glass in fixed sash are set in 2¼ by 3½-inch wood frames. Stiles and rails of sliding doors are 1¾ by 3½-inch wood members. Doors and sash are made secure against the elements by using weather stripping. The designer has eliminated all moulded surfaces in the design of doors, sash and adjoining surfaces. A clever use of glass stops is noted for doors where stop protrudes beyond the face of rail. This creates a deep shadow line on door face.

In operation the doors slide across the face of fixed sash. In this case this condition is not an objection because the face of the door rails and stiles approximate the width of wood frame for fixed sash.



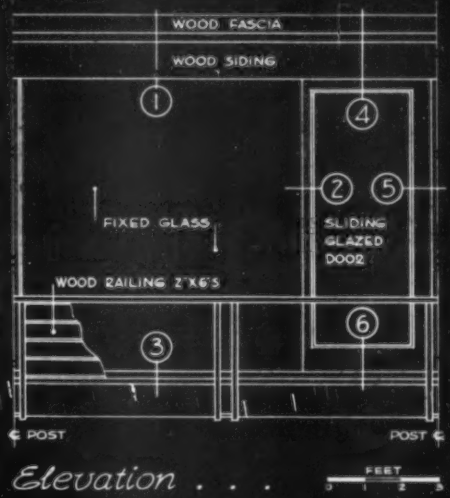
How To Use a Magnetic Hammer

Use a 12x14 inch piece of plywood and secure a 2-inch block under one end. This will provide an inclined surface. Tacks spilled on upper end will assume a head down position on jarring the board slightly. Then they are ready for pickup with hammer.—M. J. Hiland, Lansing, Mich.

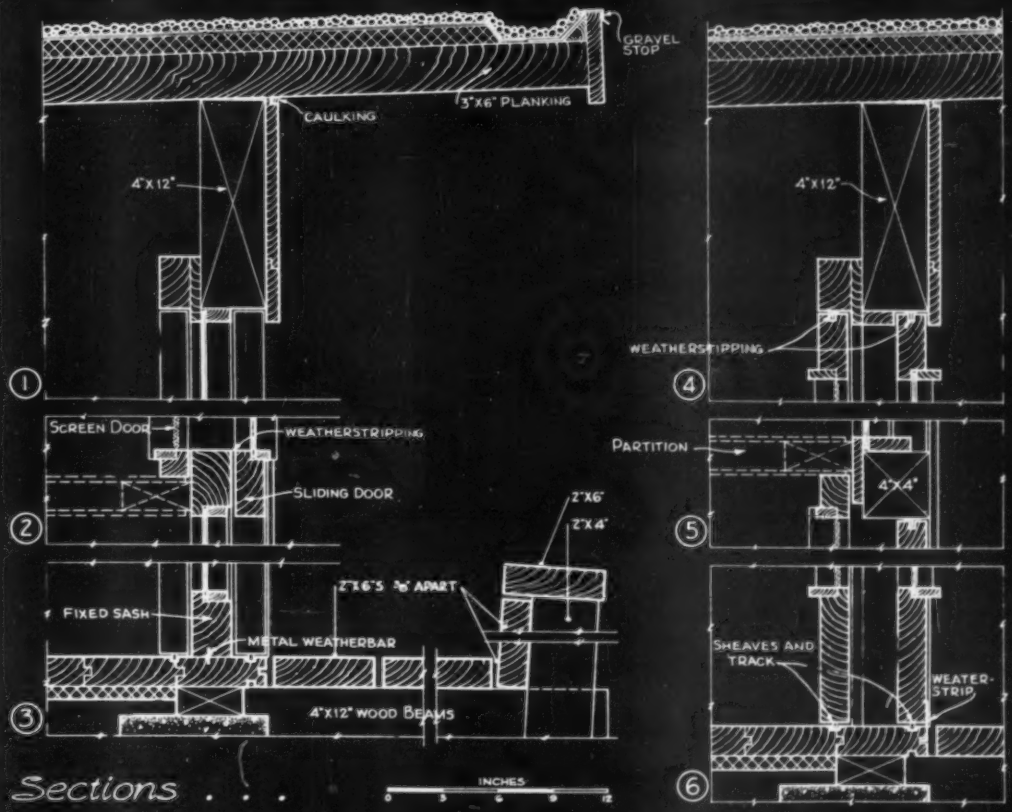
AMERICAN BUILDER'S BETTER DETAIL PLATE

Detailed by K. Roderick O'Neal A.I.A. for *American Builder*

NO. D 87 WINDOW WALL . . .



Elevation . . .



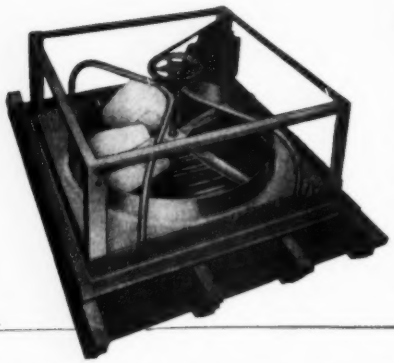
Sections . . .

It's Good Business...

LAU

Robert C. Davenport, President
Hollin Hills, Inc., Alexandria, Va., says:

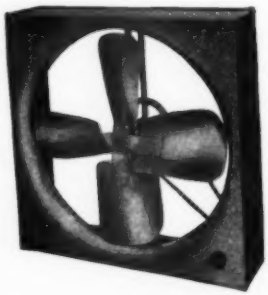
"We consider an attic fan essential equipment in our contemporary houses." Hollin Hills, Inc. has completed 110 homes (all are equipped with LAU Rancher Fans) and the project calls for 360 homes to be built. Hollin Hills has received two regional awards by the Southwestern Research Institute and the National Association of Home Builders.



"Niteair" Rancher Fans

- The Complete, efficient "Package" unit.
- Four sizes: 24" - 30" - 36" and 42"
- Sealed Ball Bearings never need oiling
- Rubber-cushion mounted; quiet, vibration-free
- Designed for homes with Low-Pitched Roofs
- Quick, simple and easy to install

"Niteair" Panel Fans



- For Residential, Commercial and Industrial use
- Five sizes: 24" - 30" - 36" - 42" and 48"
- Great Flexibility of Installation and Performance
- Self-aligning Pillow Blocks, Durex Bronze Bearings
- Quiet, Powerful, Trouble-free operation
- Built for years of satisfactory service.

Certified Ratings AMD UL

Write today! Ask for full information about LAU Rancher and Panel Fans . . . request specification sheets #629 and #630 and Manual #601. Write for names of your local LAU representatives who can engineer fans for the proper specifications of your homes.

THE LAU BLOWER COMPANY

2023 Home Avenue, Dayton 7, Ohio

to install "Niteair" Fans

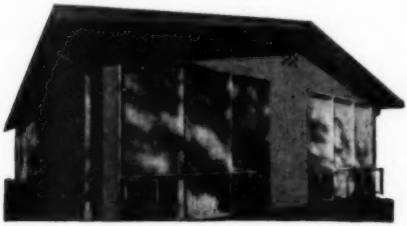
When You Build!

Not only Hollin Hills . . . but many other prominent American Builders are installing LAU "Niteair" Fans as standard equipment in new homes.

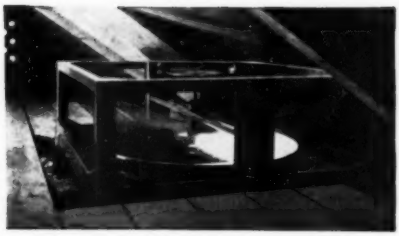
HERE'S WHY

1. "Niteair" Fans help you sell homes more quickly and more profitably!
2. "Niteair" Fans give you a substantial return on a minimum investment!
3. "Niteair" Fans give you more prestige as a leading, modern, alert builder!
4. "Niteair" Fans add the "consumer-appeal" that means fast turnover for you!

• at right: view of three "Hollin Hills" homes, all modern with large area of full height window glass, they sell for around $13,000 to $15,000. The builder has made *"Niteair" Rancher Fans standard equipment*, since only *one* out of 150 buyers turned it down as optional equipment! The 2-bedroom home gets a 24" fan...the 3-bedroom home gets a 30" fan.



• at left: notice the series of circular cut-outs under the eaves in the center. This is the fan discharge area and each hole is 3" diameter on 2" center. These openings are screened, the air moves out satisfactorily bringing cool breezes all through the home.



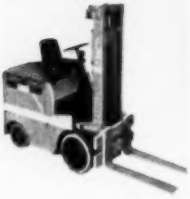
• above: here's one of the LAU Rancher Fans in operation. It pulls air UP and exhausts it *OUT*. The time required to cut and frame the opening and install the fan COMPLETE with electrical work, averaged between 1½ and 2 hours for each home.

Any builder can do what Hollin Hills is doing . . . to make homes more comfortable, more saleable and more attractive . . . like the one shown above.

THE LAU BLOWER COMPANY

2023 Home Avenue, Dayton 7, Ohio

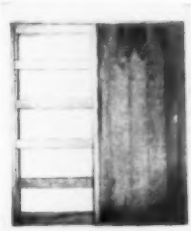
NEW PRODUCTS



AB25208 — FORK-LIFT TRUCKS — Clark Equipment Co., Dept. AB, Battle Creek, Mich. New features of these 4000 and 5000 pound fork lift trucks include: finger tip control lever on steering column, automatic acceleration, automatic emergency brake, greater maneuverability, and durable cushion tires.

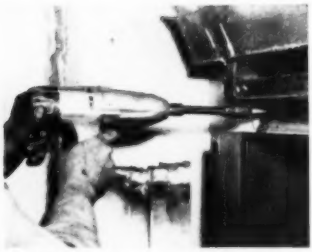
AB25206 — GASKET FOR WINDOWS — Dustite Products Co., Dept. AB, 6 Canterbury Drive, Dayton 9, Ohio. The Dustite gasket is designed with an extruded plastic sealing lip, to keep metal casement windows dust tight, storm tight, and draft tight. The gasket allows the window to be opened and closed normally.

AB25209 — ELECTRIC RANGES — Detroit-Michigan Stove Co., Dept. AB, Battle Creek, Mich. The new AB electric range, model 50 680, is designed for use in apartments. It features 7-heat rod-type surface units, extra large oven, smokeless broiler pan, titanium porcelain for exterior finish, pyrex window.

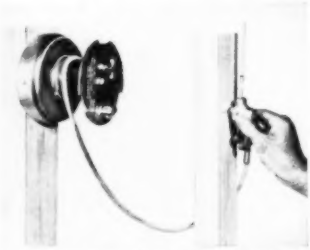


AB25205—ROLLERDOORS —Nova Sales Company, Dept. AB, Trenton, N.J. Nova roller doors are in sizes and finishes to meet every requirement. They are strong, light, and warp resistant. The unit is ready to install in a wall pocket. It can be used in plaster or dry wall construction and installed in 30 minutes.

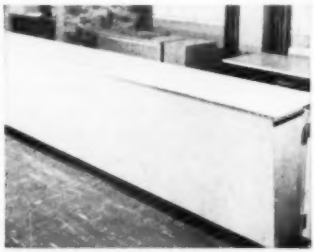
AB25204 — INVISIBLE HINGES—Soss Manufacturing Co., Dept. AB, P. O. Box 38, Harper Station, Detroit 13, Mich. Invisible hinges add to the beauty of flush doors. The hinge has no protruding butt and is completely hidden from view. As no face surface of the door has hinge hardware it's a flush installation.



AB25218—ELECTRIC IMPACTOOL—Ingersoll-Rand Co., Dept. AB, 11 Broadway, New York 4, N.Y. Use of one 6 lb. 8 oz. electric Impactool cut time and labor costs in the installation of new elevator doors at the Lamar Hotel, Houston, Texas, according to the Company. A job normally scheduled at 24 working days for a 2-man crew using ordinary hand tools was complete in just 12 days with the Ingersoll-Rand Impactool. With its extension the tool reaches bolts or cap screws in otherwise inaccessible places.



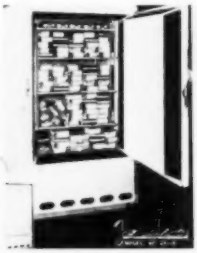
AB25221—HYDROSTATIC PRINCIPLE LEVEL—Hydrolevel, Dept. AB, 53 DeSoto Ave., Ocean Springs, Miss. Hydrolevel announces a new levelling instrument based on a new application of the old principle that a liquid seeks its own level. Operated by one man, according to the manufacturer, the instrument establishes level lines with accuracy. Constructed principally of aluminum and plastics, there are no delicate parts with sensitive adjustments. No special precautions are required in handling the instrument.



AB25222—DECORATIVE PLASTIC LAMINATES—Consolidated Waterpower & Paper Co., Dept. AB, Wisconsin Rapids, Wis. Consoweld Decorative Laminates come in a wide range of colors and patterns, including solids, linens, tweeds, dimensionals and woodgrains. Consoweld withstands temperatures up to 275 degrees F; is highly resistant to cigarette burns, and with normal usage will not crack, craze or break said the manufacturer. Panels up to 16 feet long are available.

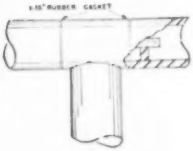
AB25217—TILE ADHESIVE Minnesota Mining and Manufacturing Co., Dept. AB, 900 Fauquier St., St. Paul, Minn. Mastic adhesive tends to cut the cost and labor time involved in the setting of clay tile, according to the manufacturer. Tile may be installed by the floating or buttering method. Mastic dries quickly.

AB25207 — HOT WATER TANK — Mor-Flo Heater Corp., Dept. AB, 2175 E. 76th St., Cleveland 3, Ohio. A stone-lined tank which eliminates leaks due to rust and corrosion. It is designed for residential use, with standard side-arm heaters, and will deliver from 28 to 60 gallons of hot water depending on size.



AB25225 — REACH-IN FREEZER—Jordon Refrigerator Co., Inc., Dept. AB, Philadelphia 43, Pa. New Jordon Model UF 15 upright, reach-in type freezer measures 72 inches high, 40 inches wide and 31 inches deep with 15 cu. ft. capacity equal to about 500 pounds food. Less floor space than chest type.

AB25211 — AUTOMATIC WASHER — Blackstone Corporation, Dept. AB, Jamestown, N.Y. The Blackstone automatic washer has an eight pound capacity. The tub holds 14 gallons of water. The heavy duty 1/3 H.P. motor spins the tub at 550 rpm in the drying action. The agitator is made of aluminum.



AB25216 — HAND RAILS — Seaporcel Metals, Inc., Dept. AB, Long Island City, N. Y. A flush type hand rail made of porcelain enamel has a concealed fastening device that doesn't need welding. The rail is rigid, vermin-proof, and has no crevices for dust accumulation. Deck, stair, and guard rails are other uses.

New Products continued on page 166

"Heatilator Fireplaces never smoke, lady — that's my pipe!"

No complaints come back to haunt you when you build fireplaces around the Heatilator* Fireplace unit. They won't smoke and they'll always work, because the unit is scientifically designed. You save grief from the word go and there is a real saving in labor and materials otherwise required.

Most important, a heat-circulating Heatilator Fireplace is one of the best sales features that you can put into any home. Insist on the genuine Heatilator Fireplace ...the name your customers know and respect. Heatilator, Inc., 322 E. Brighton Ave., Syracuse 5, N.Y.

*Heatilator is the reg. T.M. of Heatilator, Inc.

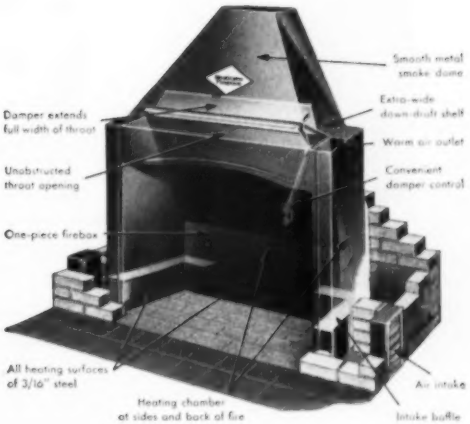
GOODBYE GRIEF!

when you use the famous

HEATILATOR

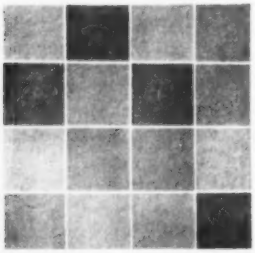
T. M. REG. U. S. PAT. OFF.

FIREPLACE

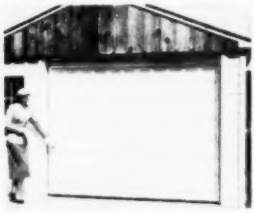


NEW PRODUCTS

(Continued from page 164)



WALL COVERING **AB25229**
A newly-developed wall covering features an alkali-resistant enamel finish and a Neo-felt backing. The finish offers clearer and more sparkling colors. The backing is saturated with Du Pont neoprene which makes it more pliable and easier to cut and install. It is produced in six colors with a white mortar line. The oyster white is accentuated by dark mortar lines. Three shades of a color create a shadow block effect. Sloane-Blabon Corp., Dept. AB, 295 Fifth Ave., New York 16, N. Y.

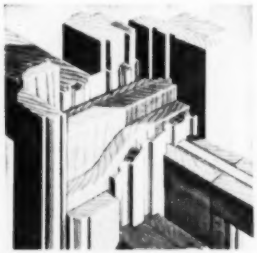


GARAGE DOOR **AB25226**
New dimensions for an all-steel garage door will accommodate wider automobiles. The door is a 9x7 foot, track-type, canopy style. The canopy projects 63 inches when open. X-type steel bracing adds to the strength and rigidity of the one piece door. The door is rust protected by a galvannealing process that consists of a heavy galvanized zinc coating which is oxidized to provide a paint base. No prime coat is needed. Strand Garage Door Div., Detroit Steel Products Co., Dept. AB, 3101 Griffin St., Detroit 11, Mich.

CORNER MESH **AB25201**
A smooth edge corner reinforcement, for plaster walls and ceilings, eliminates sharp dangerous edges that cause injury and loss of time. The mesh lays flat and has a 100 degree angle for faster installation and plastering. It can be used over gypsum lath, masonry, and is also helpful in preventing plaster cracks where different plaster bases abut. The Selv-Edge Cornerite is available in 3x3-inch and 2x2-inch sizes. Manufactured by United States Gypsum Company, Dept. AB, 300 W. Adams St., Chicago 6, Ill.

CORNER LAVATARY **AB25237**
Both space and money savings are realized with this new Eljer corner lavatory. The unit has been designed for new and remodeled construction. The 17x17-inch vitreous china unit projects 20 inches from the corner. It is furnished with a combination supply and pop-up waste. Faucet parts are easily renewable and incorporate the exclusive Eljer swivel disc. The over-flow is hidden under the front anti-splash rim giving a smooth attractive appearance to the back wall. Eljer Company, Dept. AB, Ford City, Pa.

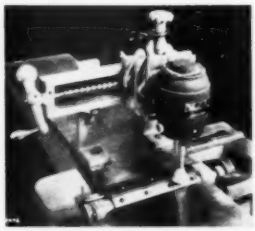
WATER HEATER **AB25238**
One of the features in a new line of gas automatic water heaters is 3/16-inch boiler plate and magnesium anodic rods. The gas burner has the Grayson Unitrol control with 100 per cent shut off. Burners are the one piece cast iron banjo type. Insulation is fiber glass. The units are A.G.A. approved. Seidelhuber Iron and Bronze Works, Inc., Dept. AB, 3693 E. Marginal Way, Seattle 4, Wash.



REMOVABLE WINDOW **AB25239**
A combination jamb and weatherstripping makes possible a removable sash unit. The floating action jamb has a continuous one-piece bronze spring running from top to bottom in back of each sash track. Windows can be removed from either side of the frame. The constant spring pressure on the window makes the unit rattle and whistle-proof. Any mill can produce the windows by securing the hardware from Ace Seal-Rite Sales and Window Manufacturing Co., Inc., Dept. AB, 26015 W. Warren, Garden City, Mich.

NEW PRODUCTS

SQUARE SAW BLADE **AB25203**
Claimed by the manufacturer to be a revolutionary development in saw blades, this square model is said to handle cross and rip sawing faster. The square design has less teeth and less friction during the cutting operation. The blade runs cooler and requires less power to operate. It is available in all standard sizes and shape arbors. Manufactured by Clark and Sawyer, Inc., 602 Mateo St., Los Angeles 21, Calif.



KNIFE GRINDING ATTACHMENT AB25213
A knife grinding attachment makes possible the resharpening of blades without removing the cutter head from the machine. The company's 8-inch joiner is furnished with a table drilled and tapped to receive the attachment. The proper grinding angle can be obtained by placing a pin through the stop bar into the end of the head. A ball crank handle guides it across the knives. Delta Power Tool, Rockwell Manufacturing Co., Dept. AB, 600 E. Vienna Ave., Milwaukee 1, Wis.

VERTICAL BLINDS **AB25223**
Colorful 3-inch-wide adjustable panels of Celanese fabric is a new type of functional window decoration. The movement of the louvers is controlled by a hidden lever which operates quietly to regulate light, ventilation, and privacy. The units are adaptable for window coverings, partitions, and backdrops. Panels can be cleaned by washing and hanging on the frame while wet. No ironing is needed. They are available in 25 colors. Youngstown Industries, Inc., Dept. AB, 710 S. State St., Girard, Ohio.

New Products continue page 168

Under construction:

A CHARMING VILLAGE INSTEAD OF JUST ANOTHER HOUSING DEVELOPMENT

Imagination is helping to make this housing project a cluster of *distinctive* homes rather than a clutter of identical ones.

Take the roofs, for instance. Variety in color and roof design makes each one different from its neighbors, yet the same fire-resistant shingles have been used throughout—Certain-teed's THICK BUTT Asphalt Shingles.

With this wide range of solid colors and artistic blends—available with grained or plain surface—Certain-teed's THICK BUTT Shingles offer a sensible, economical answer to one of today's major building questions: how can housing developments be made *distinctive?*

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ARDMORE, PENNSYLVANIA

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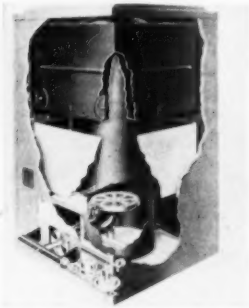
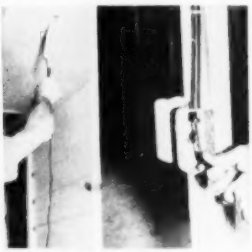
GYPSUM PLASTER • LATH • WALLBOARD • ROOF DECKS
ACOUSTICAL TILE INSULATION FIBERBOARD

NEW PRODUCTS

(Continued from page 166)



GAS GRAVITY FURNACE **AB25240**
This gas-fired furnace has been designed especially for small and medium sized homes, stores, and offices. The unit is equipped with positive safety shut-off controls, accurate temperature control and noiseless operation. No electrical power source is needed. Pilot generator supplies the required current. It is approved by the A.G.A. Ingersoll Products Division, Borg-Warner Corp., Dept. AB, 760 E. Vine St., Kalamazoo, Mich.



PLASTIC PIPE AND TUBING **AB25241**
Plastic pipe and tubing is being used by a Houston, Texas contractor for telephone raceways. Building codes in the area require the installation at the time of construction. The plastic material is lightweight and flexible in a cold state. It is manufactured by the Carlon Products Corp., Dept. AB, 10265 Meech Ave., Cleveland 5, Ohio.

STEEL TAPE **AB25231**
The "Big Chief" is the newest addition to the line of Carlson rules. The tape features a $\frac{3}{4}$-inch wide face and a blade 10 feet long. The extra rigidity of the wider face allows full 10 foot overhead extensions of the rule. The bottom edge of the rule is graduated in inches and the top edge in feet. A blade can be changed in ten seconds if it becomes damaged. The tip rotates to allow accurate inside, butt-end and depth measurements. Carlson and Sullivan, Inc., Monrovia, Calif.

ADJUSTABLE SPOTLIGHTS **AB25232**
Adjustable spotlights, trade named "Controlite" are recessed fixtures intended for dramatic effect lighting. The units provide 360 degree horizontal rotation, and 42 degree tilt from the vertical. They are finished in satin chrome. Manufactured by Marvin Manufacturing Co., Marco Incandescent Recessed Lighting Fixtures, Dept. AB, 3071 E. 12th St., Los Angeles 23, Calif.

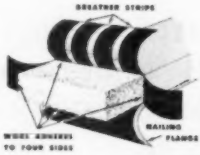
RESIDENTIAL BOILER **AB25233**
A new line of oil boilers consists of square units with rounded corners that take up no more floor space than an automatic washer. The units are available in four sizes, ranging from 80,000 to 100,000 BTU's. The units designed for hot water heating systems feature an insulated cabinet, steel plate heating boiler, wall flame burner, hearth, standard controls, and built-in copper coil instantaneous type domestic hot water heater. Timken Silent Automatic Division, The Timken-Detroit Axle Co., Dept. AB, 100 Clark St., Detroit, 32, Mich.

PLASTIC GLAZING **AB25234**
A translucent plastic sheeting is available in flat panels for use in a variety of structural and decorative applications. The material is suitable for side and skylighting in industrial and commercial buildings. The material is made of resins and glass fibers combined under heat and pressure. It is available in six standard colors. The manufacturer claims the shatterproof material will be important in defense areas. Alsynite Company of America, Dept. AB, 4670 DeSoto St., San Diego, Calif.

ONE COAT PAINT **AB25228**
A flat, one-coat oil paint has been developed from special non-penetrating oils. The new formulation makes possible a prime and finish in one coat. The manufacturer states that it is not necessary to fill fine cracks. The paint can be applied over rough cement, plaster, plywood, wallboard, brick, or concrete. Available in white only, it comes packaged in quarts, gallons, two and five gallon pails and drums. Tripl-Action Flat, M. J. Merkin Paint Co., Dept. AB, 1441 Broadway, New York 18, N.Y.

MASONRY ANCHORS **AB25227**
A plastic anchor for masonry surfaces is made of Tenite. The anchors are practically indestructible, corrosion-proof, non-magnetic, low thermal conductivity, and are good electrical insulators. The plastic anchor withstands extreme temperatures and is not affected by atmospheric conditions. The units have been tested by manufacturers, building trades, homes, and municipalities. Scru-Tite Anchors, Master Craft Products, Dept. AB, 95-01 150th St., Jamaica 4, N. Y.

AIR CONDITIONER **AB25235**
For quieter operation the unit has been equipped with a vibration-muffling spring mounted compressor and full glass fiber acoustic and thermal insulation. The two knob control panel allows the owner to set the desired temperature, operate the unit for heating or cooling, or use the fan alone. It requires only one electrical and three piping connections. The unit is available in 3, 5, and $7\frac{1}{2}$ ton capacities for stores, offices, apartments, laboratories, drafting rooms and factory spot installations. Trane Company, Dept. AB, La Crosse, Wis.



INSULATION **AB25236**
A specially treated enclosure to which the rock wool adheres provides a built-in vapor barrier. There is a nailing flange on one side and a breather-cover on the other three sides. As a result of the tough bond between the rock wool and the enclosure, the batts and the blankets can be handled and applied with no danger of slipping and sagging. Blanket width is 15 inches and standard length is 8 feet. Batts are made in two and four foot lengths. National Gypsum Co., Dept. AB, Buffalo 2, N. Y.

(Continued on page 170)

See this latest, greatest advance in automatic dishwashing!

Youngstown Kitchens

1952 JET-TOWER® DISHWASHER

with Positive Hydro-Electric Control

FOR greater sales appeal in 1952, be sure you see this newest development in automatic dishwashing—the new 1952 Youngstown Kitchens Jet-Tower Dishwasher with positive Hydro-Electric Control.

Positive Hydro-Electric Control perfectly synchronizes Jet-Tower Dishwashing! There's everything a housewife and home buyer wants in completely automatic, completely efficient dishwashing! Positive Hydro-Electric Control is simplified, trouble-free control that gets the utmost out of every second of time, every drop of water, every bit of detergent.

What an added house-selling feature . . . Youngstown Kitchens Jet-Tower Dishwasher that washes dishes faster and cleaner than can possibly be done by any man, woman or other machine!

Get the facts on how Youngstown Kitchens can save you time and money—and make your houses more modern. Contact your nearest distributor, or *Builder Sales Division, Mullins Manufacturing Corporation, Warren, Ohio.*

Youngstown Kitchens Jet-Tower Dishwasher, 27" wide.

Youngstown Kitchens

MULLINS MANUFACTURING CORPORATION
WARREN, OHIO
World's Largest Makers of Steel Kitchens

NEW PRODUCTS

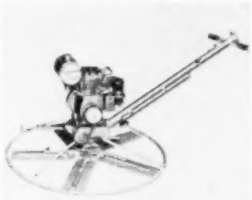
(Continued from page 168)

PORTABLE SAW **AB25214**
A low cost 6½ inch saw has many advantages of higher priced models. The unit will cut through two inch stock on a 45 degree angle. It also features a built-in bevel and depth adjustments which are easily adjusted and remain accurate. It has a trigger switch, blade guard cover, and a plastic window which allows the user to see the line of the cut. Ramsaw, Master-Taper Co., Dept. AB, 4531 N. Beacon St., Chicago 40, Ill.

CORRUGATED ROOF DECK **AB25210**
Labor savings are realized by reducing the total number of side laps with this wide cover roof decking material. Each sheet covers up to 35 square feet. Rib depth of the deck is uniform and is the same thickness as a normal 2 4 inch framing member. A rust proof paint is baked on and serves as a primer or the permanent finish. It is available in lengths up to 14 feet 4 inches. Granco Steel Products Co., Dept. AB, Granite City, Ill.

STORM SCREEN COMBINATION AB25215
The recent addition of a storm-screen combination makes the Andersen Pressure Seal Double Hung Window a complete unit. Formerly screens for the units had to be purchased from local millwork sources. The unit features a full length wood screen reinforced by a narrow aluminum center bar. Two lightweight wood storm panels fit into the screen from the inside and are held in place by thumb operated fasteners. Andersen Corp., Dept. AB, Bayport, Minn.

WATER REPELLENT **AB25220**
A silicone based liquid water repellent for uncoated masonry walls will penetrate ¼ to ⅛ inches. The transparent, colorless liquid protects from water and moisture, but does not close the masonry pores. It is recommended for brick, block, stucco, stone, and marble surfaces. Effectiveness is believed to be for 20 years. The Monroe Co., Inc., Dept. AB, 10703 Quebec Ave., Cleveland 6, Ohio.



CONCRETE FINISHING MACHINE AB25202
A new finishing machine in the Whiteman line has five rotating trowels instead of the usual three. This makes it possible to move on a wetter slab, saving waiting time. The machine can also be used for both floating and finishing by a pitch adjustment for the trowels. The unit is powered by a 6 h.p., 4 cycle gas engine. Manufactured by the Whiteman Manufacturing Co., Dept. AB, 3249 Casitas Ave., Los Angeles 39, Calif.

TROUGHED BELT CONVEYOR **AB25219**
Model 638 is a new heavy duty belt conveyor designed for the construction industry. The unit brings greater economy because of its higher handling speeds. The boom is hydraulically operated. Other features are simplified drive and controls, improved maneuverability of individual wheel steering, and heavy duty frame. Fairchild Engineering Co., Dept. AB, Marion, Ohio.

GAS FIRED FURNACE **AB25230**
Designed to fit in tight places in the small ranch-type house, this A.G.A. approved furnace is available in two sizes. The 85,000 and 110,000 BTU units feature remote pilot lighter, burner and control plate mounting, and filter racks which are available at no extra cost. The unit is manufactured by the Richmond Radiator Co., Dept. AB, 19 E. 47th St., New York 17, N. Y.

INSULATION **AB25212**
A highly reflective aluminum vaporseal cover has been added to the Kimsul cellulose fiber blanket insulation. The insulation is available in 16, 20, and 24 inch center-to-center frame spacing. The compressed material is packaged in 100 and 200 square foot rolls with the necessary fiber strips for fastening the ends of the blanket. For easier measuring trademarks are spaced 24 inches apart and fastening targets are six inches apart. Kimberly-Clark Corp., Dept. AB, Neenah, Wis.

USE THIS COUPON FOR MORE INFORMATION ON NEW PRODUCTS IN THIS ISSUE
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When you address inquiries direct to manufacturers concerning a new product described here, please mention that you saw it described in American Builder

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600,000 starts or 900,000 starts, easy credit or tough, the home that sells is the home that offers the buyer extra value. One way to provide that value is to install Fiberglas* Building Insulation—in both walls and ceilings.

Fiberglas Insulation has always given you an important selling advantage. Universally known, home buyers, architects and lending agencies alike are quick to recognize this insulation as a sign of *quality* construction.

That's why it pays you to promote Fiberglas Insulation—to make it a part of your sales talk. Fiberglas Building Insulation is made of ageless, fire-safe fibers of glass, will not settle. In roll blanket form, it provides a continuous, vapor barrier which more than meets FHA requirements.

What do you get out of it? In addition to the selling advantages, you get labor savings. Fiberglas Insulation is easy to handle, fast to install. The longer, compression-packed rolls mean less cutting and fitting.

For complete information on this superior insulation, write anyone of the five industry leaders listed below. Owens-Corning Fiberglas Corporation, Dept. 62-B, Toledo 1, Ohio. *Improving Building everywhere by co-sponsoring the Housing Research Foundation of the Southwest Research Institute.*

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CERTAIN-TEED PRODUCTS CORP Ardmore, Pa.

THE FLINTKOTE COMPANY New York, N. Y.

MINNESOTA AND ONTARIO PAPER CO. Minneapolis 2, Minn.

KELLEY ISLAND LIME & TRANSPORT CO. Cleveland, Ohio

Speed like this pays off big!

"3 TIMES FASTER than hand tying with wire," reports this big mid-west builder. He uses Bostitch P7 stapling pliers to "hog-ring" wire mesh together before pouring gypsum on flat roofs. It's a one-hand operation . . . and with gloves on, at that! Worth looking into, isn't it?

"4 TIMES FASTER than hammer and nails," says this wall tile specialist. Here, one of his men uses a Bostitch H2B stapling hammer to fasten metal lath to bathroom walls. Notice fast, easy, one-hand operation! Why not speed up your next metal lath job this easy way?

"TWICE AS FAST as hammer and nails," agree thousands of satisfied users of Bostitch T5 stapling tackers. Here three of them make short work of a ceiling tile job . . . and without fear of hammer-marring or finger-marking surfaces. This quick, easy method will cut your costs, too!

SAVE TIME, TROUBLE AND MONEY with Bostitch stapling hammers, tackers and pliers. You can choose from a complete line designed to speed up your roofing, insulating, lathing, paneling and screening jobs. The coupon below will bring you all the cost-cutting facts . . . fast.

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BOSTITCH, 554 Mechanic Street, Westerly, Rhode Island

I'm interested in more information about time-saving, cost-cutting Bostitch machines for applying:

☐ **Insulation** ☐ **Paneling** ☐ **Building Paper**
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Catalogs—

and Manufacturers Literature

174—AIR-CONDITIONING—"No Season but Spring Twelve Months a Year" is the title of a new 6 page folder issued by Carrier Corp. The folder describes both summer and winter air conditioning. Schematic diagrams and specifications are included. Carrier Corp., Dept. AB, Syracuse, N. Y.

175—COLOR STAINS—A 4-color folder shows the various stain colors produced by the manufacturer. The sixteen western tones, developed for rough surface lumber, are shown in their true colors. Olympic Stained Products Co., Dept. AB, 1118 Leary Way, Seattle 7, Wash.

176—METAL MESHES—A 24-page booklet has been published showing the manufacturing of metal mesh. The publication is illustrated with many suggested uses of the material. Decorative, functional, and industrial uses are covered. Penn Metal Co., Dept. AB, 205 E. 42nd St., New York 17, N. Y.

177—METAL AWNINGS—ventilated all-metal awnings and door canopies are described in a 4-page folder. Available sizes, installation diagrams and suggested uses are featured. The Troy Sunshade Co., Dept. AB, Troy, Ohio.

178—DIESEL ENGINES—A new comprehensive bulletin has been issued by the manufacturer describing the type FV diesel engine. The units are built in 6, 8, 12, and 16 cylinder types. Engineering data, specifications, and power ratings are included. Cooper-Bessemer Corporation, Dept. AB, Mount Vernon, Ohio.

179—AUTOMATIC GARAGE DOOR OPENER—A descriptive booklet gives information on the electronic principles for the automatic operation of garage doors. The unit also turns off the garage light. Robot Appliances, Inc. Dept. AB, 13165 Prospect St., Dearborn, Mich.

180—TRENCH DIGGER—A 6-page booklet shows photographs and technical information on a trencher that digs six to 20 inches wide and depths up to seven feet. Speeds of up to 800 feet per hour are possible with the tractor attachment. Blackhawk Trench Hog, Arps Corp., Dept. AB, New Holstein, Wis.

181—SHINGLE CUTTER—A new lightweight model shingle cutter that can be used on scaffolding is explained in a 6-page folder issued by the manufacturer. Specialty Tool Manufacturers, Dept. AB, 732 S. Illinois St., Belleville, Ill.

(Continued on page 174)

Here's one of the greatest product improvements in asphalt tile history:

NOW MATICO IS FORTIFIED

with polystyrene plastic

Fortified MATICO assures easy, fast installation . . . long-lasting floors . . . clear, bright colors.

QUALITY CONTROLLED
MA-TI-CO. TILE FLOORING
Guaranteed by Good Housekeeping

New, fortified MATICO is a flooring that is far superior to ordinary asphalt tile, yet costs no more.

The addition of polystyrene plastic resin makes possible square tiles with sharp corners and edges, and a smooth surface. Installation is easy, fast, less costly.

Breakage is reduced, too, and floors are long-lasting because the high molecular weight of polystyrene gives extra toughness, strength and flexibility.

Bright, enduring colors are also provided by MATICO's new plastic content. A great variety of colors including beautiful pastel "Petal Tones" are available in the MATICO line.

When next you select asphalt tile for a project, be sure it's MATICO, and you'll be sure it's the best.

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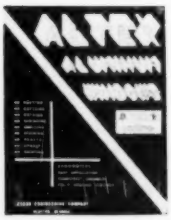
WORLD'S LARGEST PRODUCER OF ASPHALT TILE

Catalogs

(Continued from page 172)

188—STEEL EXTERIORS—A 32-page booklet of steel exteriors for multi-storied buildings has been published. The booklet describes the various exterior panels and has diagrams and working drawings. Well illustrated, this booklet is published by United States Steel Products Co., Dept. AB, 28 Rockefeller Plaza, New York 20, N. Y.

189—SAND FINISH WALL COATING—A 4-page 2-color booklet gives descriptive information for a sand finish wall coating for both exterior and interior. Conduro, Tuff-Kote Co., Dept. AB, St. Charles, Ill.



190—ALUMINUM WINDOWS—A catalog of double hung aluminum windows features suggested installation diagrams and details. Glass arrangements, sizes, and specifications are included in the publication. Altex Aluminum Window Division, Lessud Engineering Co., Dept. AB, Clayton, Georgia.

191—TOILET—A new no-odor toilet is explained in a 2 page folder issued by the manufacturer. The unit uses no chemicals and its installation requires no changes in the plumbing system. The No-Odor Toilet Co., Dept. AB, Sterling, Ill.

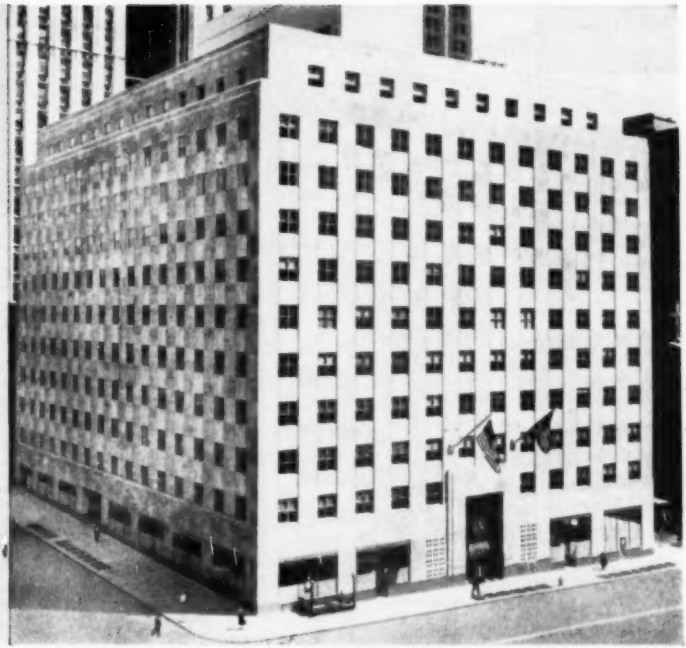
192 — PREFABRICATION—A booklet directed to home builders, realtors, lenders, and government officials describes the ability of the prefabricated industry to produce quality homes faster, at less cost, and savings of labor and materials. Prefabricated Home Manufacturer's Institute, Dept. AB, 908 20th St. N.W., Washington, D. C.

193—FURNACE BUILT INTO CHIMNEY—A furnace enclosed in a special-sized chimney is fully described in a 4-page folder issued by the manufacturer. The unit is adaptable to basementless houses of either slab or crawl space construction. Very little duct work is needed. Due to the unique arrangement of the cold air return, the manufacturer claims that 25 percent more heat is obtained from a gallon of oil. Mortemp Furnaces, Chimney Furnace Corp., Dept. AB, P.O. Box 386, Rockville, Md.

194—SUGAR PINE—A 52 page booklet prepared by the Western Pine Association describes the character, uses and grades of Sugar Pine. The book outlines the physical properties of the wood. Full page illustrations show grade examples. A listing of recommended grades for specific purposes is included. Western Pine Assn., Dept. AB, 510 Yeon Building, Portland 4, Oregon.

(Continued on page 176)

For the Dun & Bradstreet Building



Dun & Bradstreet Building, New York City Architect: Reinhard, Hofmeister & Walquist Contractor: George Fuller Company

Adlake aluminum windows

The woven-pile weather stripping and *exclusive* patented serrated guides that are a vital part of ADLAKE Aluminum Windows mean complete *weather protection* for Dun & Bradstreet's new New York offices. Wind, rain and cold will not penetrate their positive weather seal.

What's more, these ADLAKE Aluminum Windows will ultimately *pay for themselves* by eliminating all maintenance costs except routine washing. They'll never warp, rot, rattle, stick or swell, and they will keep their weather seal, beauty and finger-tip operation *for the life of the building!*

Let us show you how ADLAKE Aluminum Windows will guarantee continuing satisfaction to your clients, while they save them money! ADLAKE Representatives are in all principal cities.

every Adlake window gives you these "plus" Features:

- **Woven-pile Weather Stripping and Exclusive Patented Serrated Guides**
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L & K 48" KITCHEN . . . *For the first time* here's a 48" kitchen complete with oven—made possible by combining any 20" apartment range with General's L & K Kitchen, Model S-550. Has 4 cu. ft. refrigerator, storage drawer, and features a one-piece 12 x 16 inch porcelain sink-back splash-drainboard. 5 yr. guarantee.

L & K 27½" KITCHEN . . . Complete 27½" kitchen unit combines 4 cu. ft. refrigerator, sink, drainboard, storage drawer, and 3-burner gas range adjustable to natural, manufactured, or bottled (LP) gases. Model R-520 also available with 3 electric burners for 220 v., or 2 electric burners for 110 v. "plug-in" use. 5 year guarantee.

cook ON YOUR REFRIGERATOR

GAS-ELECTRIC GENERAL CHEF. Combines electric refrigeration with cooking top, gas or electric (110 or 220 v.) Requires only 4.1 sq. ft. of space. 5 year guarantee.

Distributors - Dealers - Builders - write:

These units advertised in LIFE

GENERAL air conditioning corp.
4538-C E. Dunham St., Los Angeles 23, Calif.
NATIONWIDE SALES AND SERVICE

Catalogs

(*Continued from page 174*)

182—PATTERNED GLASS—A two-color 10-page booklet issued by the manufacturer has 63 illustrations showing various installations of figured glass. Mississippi Glass Co., Dept. AB, 88 Angelica St., St. Louis, Mo.

183—THREADED BARS—A bulletin giving data on sizes, lengths, kinds of threads, bending, and types and finishes of threaded steel bars. Also illustrated are available accessories. Joseph T. Ryerson & Son, Inc., Dept. AB, Box 8000-A, Chicago 80, Ill.

184—TILE FLOORING—An 8-page color catalog which shows the various colors and patterns of the company's products, installation suggestions, and four new products has been published by the Mastic Tile Corporation of America. Dept. AB, Newburgh, New York.

185—CONCRETE FACT BOOK—A new edition on the latest technical information and field use tips on air-entrained concrete has been published. The publication is complete with photographs of concrete construction projects. Questions and their answers appear concerning the air-entrainment technique and the manufacturer's air-entraining solutions. Protex Fact Booklet. Autolene Lubricants Company, Industrial and Research Division, Dept. AB, Denver 9, Colo.

186—MORTAR PLANE—A 4-page, 2-color booklet explains the use of the Kakest Mortar Plane. The unit lays mortar on concrete block faster and with less waste. The 12 inch device holds enough mortar for four or five blocks. Kakest Company, Dept. AB, Mount Vernon, Ohio.

187—HEATING—An interesting booklet has been prepared on various types of perimeter heating installations. Plans, drawings, and diagrams accompany the various methods. The company's line of furnaces are included with working diagrams of perimeter heating systems. International Oil Burner Co., Dept. AB, 3800 Park Ave., St. Louis 10, Mo.

SERVICE COUPON—CLIP and MAIL to CHICAGO

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American Builder
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February, 1952

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HARDWARE

"A considerable savings in space and materials was made possible by our use of Har-Vey Rolling Door Hardware installations in this new apartment building,"* says *A. Osborne Willauer, Architectural Consultant for the owners, New England Mutual Life Insurance Company in Boston.* "By leaving the track exposed on the interior of the kitchen, we were able to use a 2-inch plaster partition, which saved a great deal in a building with 260 units."

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"Installation was extremely simple and compared favorably in cost with that of a conventional door."

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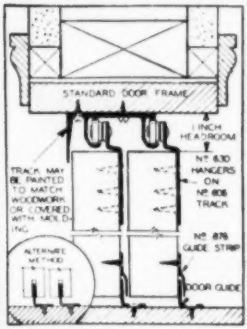

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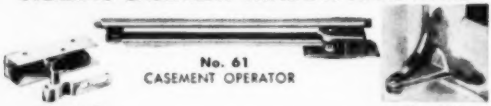

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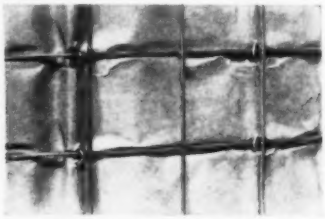
Can You Guess Them?

This new *American Builder* feature "Can You Guess Them" challenges the reader's power of observation. The subterfuge of the close-up camera photographing building material and tools can be interesting and educational.

Try it—par for the course is 4 out of 5.

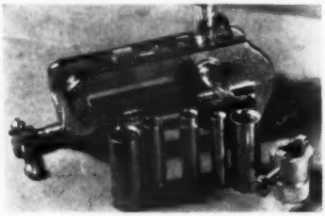
Answers appear on page 182.

1



Is it a fence or steel mesh for slabs?

2



Are these plumbing tools?

3

What are these nails used for?

4

Is it a clamp?

5

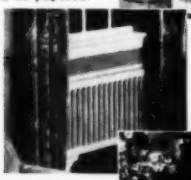
Are these metal wedges?

The ABC's of B & G Hydro-Flo* Heating

Your choice of these radiant heating units

Baseboard Panels
Baseboards are one of the latest developments in radiant heat distributing units. Baseboard panels closely resemble the conventional wooden baseboards they replace.

Convectors
Convectors are modern, remarkably inconspicuous heating units. When recessed, the front panel may be painted or papered.



Radiators
Clever stylists and engineers have made amazing improvements in the radiator's appearance and efficiency. Modern radiators can be completely recessed.

Radiant Panels
With radiant panels, the system is completely concealed. Heated water circulates through pipe coils in floor or ceiling.

*Reg. U. S. Pat. Off.

A simple explanation of why this forced hot water system provides so much comfort on so little fuel

The B & G *Hydro-Flo* System is really amazingly simple, considering the supreme comfort it gives. The three basic pieces of equipment can be installed on any hot water heating boiler.

First, the Booster Pump. When the thermostat calls for heat, the Booster rushes hot water through the system. Heat is supplied instantly . . . and smoothly modulated to meet every change in outdoor temperature!

That's why B & G *Hydro-Flo* Heating costs so little to operate. It matches fuel consumption to weather conditions.

Next, the Flo-Control Valve. It shuts off circulation when there is no call for heat. This prevents overheating—helps keep indoor temperatures uniform at all times.

And finally, the Water Heater—heated by the same boiler that heats the house, in summer as well as winter. It provides a virtually inexhaustible supply of really hot water—all you need for *dishwashing, showers, baths and automatic clothes washers!*

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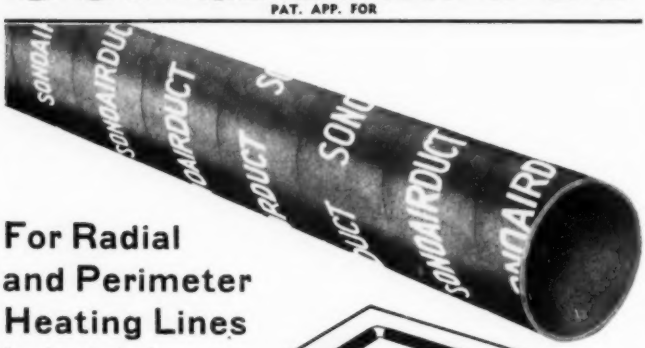
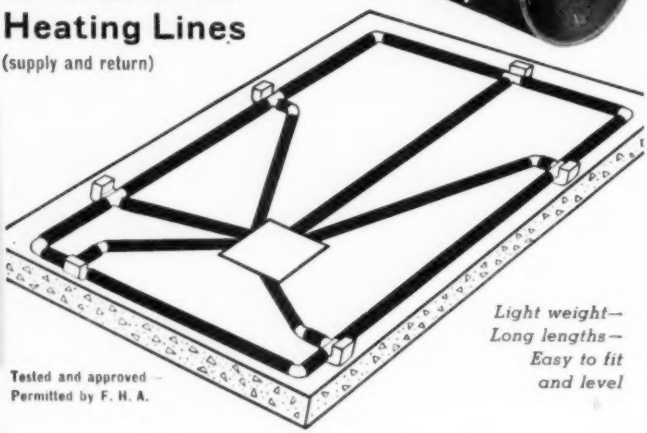


For Radial and Perimeter Heating Lines
(supply and return)



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Garrett Winter Joins American Builder Staff As Eastern Editor

Garrett Winter, who has joined the editorial staff of *American Builder* as Eastern Editor, brings to this publication a background of 15 years in editorial work in the real estate and building field.

For 13 years he was associated with the New York Sun in the real estate department. He was real estate editor of that newspaper for eight years before it was merged two years ago with the New York World Telegram, where he has been a real estate

Garrett Winter

writer. While Winter was real estate editor of the New York Sun he won first award in the "Best Real Estate Page in America" contest for 1949, and placed second in that contest the previous year. In 1950 he served as president of the National Association of Real Estate Editors.

In addition to his work and accomplishments as real estate editor on the New York newspapers, he also edited a four-page printed semi-monthly bulletin comprising a digest of realty and building information for members of the staff of the Savings Banks Trust Co., New York, for four years.

His long and active association with real estate and building industry activities has given him a wide acquaintanceship in the field, particularly in the East.

Winter was born at Lynbrook, Long Island, N. Y., 39 years ago and attended grade and high schools there. His college training included attendance at New York University and the University of Illinois, where he served two years on the staff of the Daily Illini.

He has been married for 12 years and now resides in his own home at Lynbrook, L. I., with his wife and two sons, seven and ten years of age.

His headquarters as Eastern Editor of *American Builder* are at 30 Church St., New York City.

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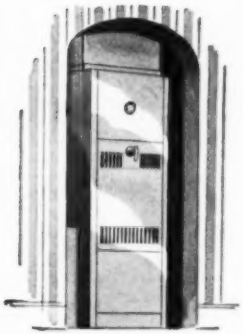

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Where space is tight, use the Richmond SU-G, gas-fired, vertical winter air conditioner . . . ideal for the small ranch-type installation.

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AB-2

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Please send me full information on Richmond SU-G gas-fired winter air conditioners.

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Electric Saw

8½" Blade 2 11/16" Cut

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Smooth—Vibrationless Dual V-Belt Drive

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Here is the saw that offers you the benefits of "Velvet-Smooth" Dual V-Belt Drive. The Dual V-Belt Drive "cushion" action adds extra life to both the motor and blades. There are no gears to require costly repair and replacement—no dirty grease leakage to spoil clean wood.

Here is the saw that is built for hard service—made of tough aluminum and steel stampings, it weighs 19 lbs.—just the right weight to handle its high speed, 6000 R. P. M., full load blade speed. The powerful motor is full ball-bearing and develops up to 1½ H. P. remaining exceptionally cool under hard service. The handle is "feather-balanced" at the center of gravity for easier handling and truer cutting. Adjustable depth of cut, from ¾" to 2-11 16", and angle cuts, from 90° to 45° for bevel cuts, afford many uses.

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Here Are Common Errors In Bathroom Design

In spite of being the smallest room in the house, a bathroom can still accommodate at least eight major mistakes in planning, according to the Tile Council of America. The room, once badly arranged, cannot be easily changed, the council said, because even simple alterations often involve expensive plumbing work. Here are the eight errors listed:

*(1) **Bad Location.*** It should not be necessary to go through another room to reach the bath. It should open from a hall, so that it can be conveniently reached from all rooms.

*(2) **Lack of Space.*** A tiny bathroom is awkward for children and invalids, and has too little storage space. Space is also needed between fixtures for ease in cleaning.

*(3) **Easily Damaged Materials.*** Finishes affected by steam and water deteriorate rapidly in the bath and are expensive at any price.

*(4) **No Shower.*** Even if a family doesn't want one for its own use, a shower is a modern feature which gives a home added re-sale value.

*(5) **Inadequate Storage Space.*** A bath with no space for towels, toiletries and cleaning materials means added work for the housewife.

*(6) **Poor Lighting.*** Too many men have to shave with a light shining in the mirror instead of on both sides of the face. A large bathroom needs both an overhead light and one at the mirror.

*(7) **No Grab Bar Over Tub.*** Slips and falls in the bathtub can be dangerous. A grab bar is a necessity, especially with a shower-tub combination.

*(8) **No Locked Cabinet for Drugs.*** Aspirin, laxatives and medicines are dangerous in the hands of children. Provide a small locked space for such items.

Answers to the new American Builder quiz game appear below. If you guessed correctly all but one you are average. If not, better luck next month.

1. Metal lath for plaster or stucco
2. Doweling jig
3. Firing nails used with the metal lath above
4. Saw vice
5. TECO triple grip braces

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YOU BUILD A BATHROOM for a lifetime of use. Make sure you build with Hall-Mack's lasting quality and style. Within four popular lines—Crystalcrome, Coronado, Tempo and China-Vogue—you can select Hall-Mack accessories for every bathroom style and budget!

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● The large number of diamond meshes in a sheet of Bostwick Metal Lath is not there by happenstance.

A complicated metal lath machine takes a sheet of solid metal 8⅞"x112" and expands it to 27"x96". As the sheet is stretched, 22,032 meshes are formed in the sheet.

Of course every sheet of Bostwick Metal Lath is square and of uniform length and width. Small meshes and square sheets are your big cost-saving features.

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THREE-BEDROOM, full-basement Harnischfeger factory-built home for 1952

1952 Line of P & H Homes Announced by Harnischfeger Corp.

The 1952 line of P & H Homes, which includes 24 models with full basement and 20 models with utility room, has been announced by Robert E. Ott, general manager of the Harnischfeger Corp., Port Washington, Wis. The new homes were designed by John Normile, A.I.A.

All 1952 P & H houses are one-story modified ranch-type, and all elevations are reversible, making a total of 88 different models.

Three basic sizes—36-, 32- and 28-foot homes—will be produced from 12 floor plans. Basement or utility room

ALL BEDROOMS in 1952 models have ceiling-height sliding closet doors

models will be offered in all sizes, as will homes especially designed for narrow lots.

The basic construction features of the 1951 line have been retained in the new homes, Ott said, but refinement of interiors, distinctive new elevations and changes in floor plan provide more living space and a greater variety of design. The firm plans, by this variety, to avoid possible production breaks under current and anticipated government restrictions.

Basic color schemes for exterior and interior, selected by Architect Normile, have been provided for the 1952 line. The firm said emphasis on color treatment was dictated by requests from the field during the year.

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Approved by Insulation Board Manufacturers in applying Ceiling Tile and Panels. The Markwell "L3D" (9/16" leg) Staple is driven flush into the nailing tongue of the tile. The Markwell gun type tacker eliminates damaged edges on tile.

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Trigger action drives staples flush into rafters, joists and studs. A gun type Insulation Tacker eliminates danger of puncturing paper backing on batts and blankets. Use "L3D" Staple in putting up Backer Boards.

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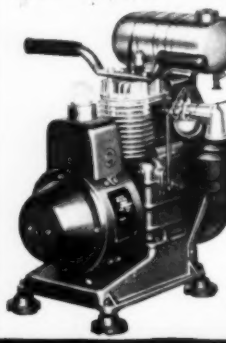

PORTABLE, low-cost model helps finish jobs faster, saves expense and bother of temporary power line hook-ups. Operates saws, drills, grinders, pipe threaders, cutters, other tools having universal (AC-DC) motors. Develops 1500 watts D.C. Compact, weighs only 75 lbs. Handles for carrying. Two-wheel, rubber-tired hand truck available. Other sizes, 350 watts to 15 KW. Write for folder 6-E.

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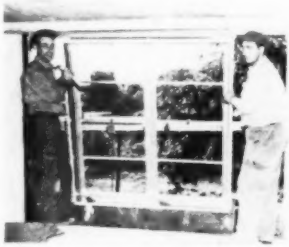
Here Are Helpful "Tips" For Installation of Aluminum Windows

Experience has shown that certain simple helps in handling and installing aluminum sash have proved valuable to builders. The members of the Aluminum Window Manufacturers Association's technical committee offer the benefit of this experience in the following pictures. Heeding their advice may help prevent costly errors.

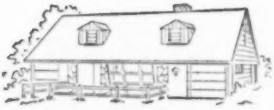


POSITION CAREFULLY—Aluminum windows are light in weight. The window should be placed so there will be no vertical load or horizontal crowding from the building structure.

LEVEL AND PLUMB—Very important in the case of aluminum windows. A careful job will assure operation with fingertip pressure.

ANCHOR FIRMLY—Rigidity of aluminum windows, and fine tolerances allowed between operating parts to insure easy operation and minimum air infiltration, call for fixing them in position correctly, firmly and securely.

(*Continued on page 188*)

For more-satisfied customers  and better-protected homes

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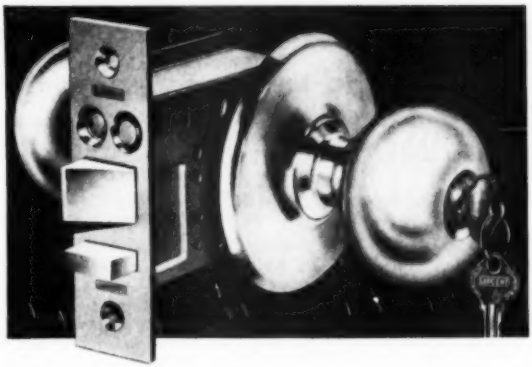
For Exterior Doors— Sargent INTEGRALOCKS



Install the *ultra*-beautiful, *extra*-safe Sargent Integralock on exterior doors!

No lock can touch it for looks!

And home owners turn to its locking dead bolt for added security.

A quarter turn of the key releases both the latch and the dead bolt . . .

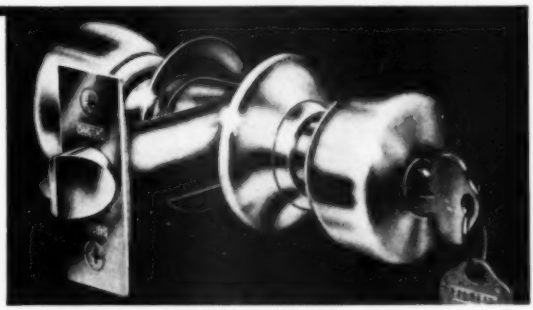
And don't forget this unique advantage:

The Shear Pin in the knob of an Integralock gives still *more* protection. It breaks when subjected to *extreme* torsion . . . the knob spins harmlessly . . . and intruders are balked.

These additional Integralock features give you still more to talk about—still more value for your customer's dollar.

. . . modern styling
. . . convenient key-in-knob action
. . . small, compact lock cases, factory-assembled, factory-sealed
. . . self-lubricating OILITE bearings
. . . easily applied—unit application

For Interior Doors— Sargent "4500" Line Locks



Install the lock that *leads* among bored-in locks.

The Sargent "4500".

These locks are beautiful in design . . . made of high quality construction throughout.

They supply the popular, convenient key-in-knob action.

Quick and easy to install . . . requires only a 1¼" crossbore.

Also important! The Sargent "4500" lock has a full ½" throw. The bolt will travel the full distance every time.

. . . separate spring for the latch bolt insures smooth, forceful latching action — twin springs for the knob hub create balanced knob performance.

No other lock in its price class has so many features.

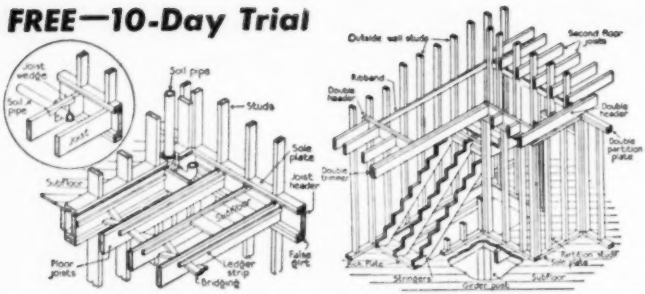
For full information about the Sargent Integralock and Sargent "4500" line locks, write your supplier...or us. Dept. 5B.

Sargent and Company

New York • NEW HAVEN, CONN. • Chicago

Builders Hardware and Fine Tools since 1864

FREE—10-Day Trial



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"HOUSE CONSTRUCTION DETAILS"

SAVE TIME AND MONEY WITH THESE LATEST PROFESSIONAL METHODS

Here is an exact working guide on every detail of house construction from foundation to finish. Tells you dimensions, materials, processes, step-by-step working methods. Hundreds of scale drawings and photographs make every step easy to follow. Quick-reference index enables you to find instantly any construction detail on which you want modern, authoritative guidance. Can be used for alterations in a set of stock plans, for making additions or changes in a building, or for complete construction of a dwelling. Conforms with modern practice and building regulations in all parts of the country. Gives you helpful ideas on how to build in accordance with latest developments in painting, wiring, heating and air conditioning, insulation and soundproofing.

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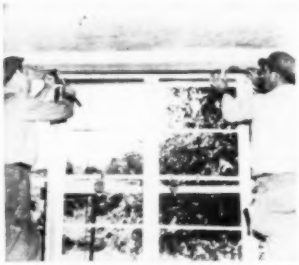
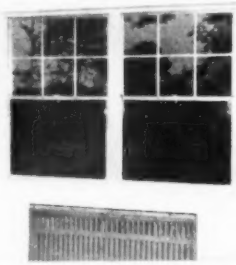
Aluminum Windows . . .

(*Continued from page 186*)



WEDGE CAREFULLY—This insures that the leveling and plumbing position will be maintained while window is being installed.



PREVENT PLASTER JAMBING—Rags stuffed between sliding members of sash and frame as shown will prevent any possibility of plaster clogging the operating parts.

DON'T DO THIS—Three errors are shown in this picture: (1) aluminum window should be rested on end in upright position; (2) it should not be rested on hardware—one corner of window is completely off the floor because of this; and (3) window should not be placed under any object (such as cement block) which might fall and damage it.

(*Continued on page 190*)

Coronado with Window Wall

the answer for '52

only a gunnison dealership offers you so much

interim financing...The Gunnison Plan of Interim Financing includes the complete cost of the Home Package, plus additional cash. This plan is available to all qualified Gunnison Dealers.

sales promotion aids... A variety of aids are available to all Gunnison Dealers.

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variety of elevation...The Champion, the Coronado and now the new Catalina. The most complete line of Homes in the Home Building Industry. The Gunnison Product Line offers a multitude of elevation, model and floor plan combinations. For the first time in the low priced field there is an "L" Shaped Home, the new Catalina.

most complete package...Your material shortage problems are shifted to other shoulders when you are a Gunnison Dealer. You become the beneficiary of a mass purchasing program which is unparalleled in the home building field.

quality, strength and durability...Quality is there for all to see. Strength and durability have been proven throughout the last seventeen years as the Homes have withstood the ravages of time, flood, weather and fire.

wood paneled interiors... All Gunnison interiors are in Wood Paneling with the famous Mellow-Tone finish. This means no costly delays due to labor and material shortages. An Owner of a Gunnison Home is presented with luxurious interiors which are dignified in their beauty and trouble free in their maintenance.

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franchised dealerships...Gunnison Dealers operate on a franchised basis in a specified territory.

Catalina

Gunnison announces an "L" shaped home!

Out of tomorrow, GUNNISON brings you their latest . . . the *Catalina* . . . to take its place along side the new '52 series of Coronado and Champion Homes! All GUNNISON HOMES are designed to sell in the $7,000 to $12,000 price range . . . America's mass market!

Fresh design and expert planning make all GUNNISON HOMES ideal for project building . . . many elevations, models and floor plans . . . and the only "L" SHAPED home in its price range! These homes feature Quick Erection, High Quality and Strength! They are delivered to the building site complete, except for plumbing, wiring and masonry work.

Here are the homes of tomorrow—your's to sell today! Sell the best—sell GUNNISON!

Investigate the possibility of including GUNNISON HOMES in your building program! For more complete information, write Dept. A-22, GUNNISON HOMES, Inc., New Albany, Indiana.

Coronado with Window Bay

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"The BARCO RAMMER Pays for ITSELF!"

Says PAUL SCHLEICHER & SONS
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"SOIL COMPACTION with the Barco Rammer has been the key to *earlier completions* and *lower costs* for us," says Paul Schleicher & Sons, Gary, Indiana, housing contractor.

The Barco Rammer is a new tool with many uses! No longer is it necessary to wait for loose earth fill, or backfill, to settle — tamp it immediately to HIGH DEGREE COMPACTION under slabs ... around foundations and footings...on grades...in trenches — SAVE TIME! CUT COSTS!

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See for yourself — ask for our nearest distributor to give you a demonstration.

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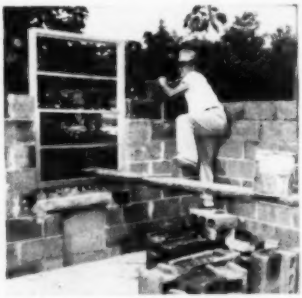
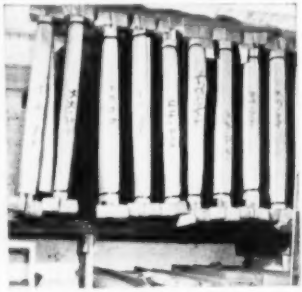
Builders of Portable Gasoline HAMMERS and RAMMERS

Aluminum Windows ...

(Continued from page 188)



NOR THIS—Probable injury to precision operation of sash can be expected when window is used as a base for a working bridge.



STACK ON END—Vertical stacking means minimum chance of an aluminum window's being thrown out of alignment.

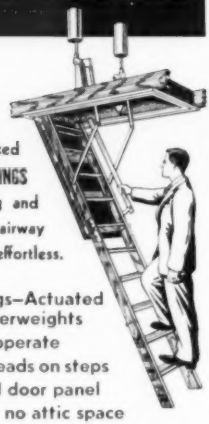
HANDLE CORRECTLY — Lift windows on and off the truck; dump truck unloading methods are likely to prove costly. When a package is broken, be sure window rides in an upright position.

25,000 Families Get Wherry Act Housing

FHA insured mortgages, totaling over $200 million have been authorized at Wherry Act projects near military installations in 25 states, according to NAHB. This will provide homes for more than 25,000 families of military personnel.

PRECISION

the only attic stairway equipped with
ROLLER BEARINGS



Life time, factory packed **ROLLER BEARINGS** make raising and lowering stairway practically effortless.

- No springs—Actuated by counterweights
- Easy to operate
- Safety treads on steps
- Insulated door panel
- Requires no attic space
- Shipped in one package

Write for full information

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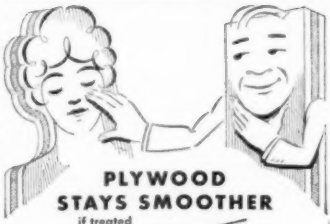
Nashville 7, Tennessee



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if treated with
CUPRINOL
Water Repellent
Wood Preservative

You'll want Cuprinol on every job of wood construction or repair — one coat saves many a headache. On plywood it minimizes grain raising and separation checks ... on sills, porch floors and in dead air spaces it stops rot, and termites . . . doors treated with Cuprinol don't swell and stick. For Cuprinol reduces moisture absorption. Takes paint perfectly. Non-toxic to handle. At Lumber dealers, or write for information on types of Cuprinol for specific uses.

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"In building 417 housing units for naval personnel DeWalt was the important part in our semi-prefabrication program"

Part of the $3,800,000 defense housing project at Annapolis, Md.

A $3,800,000 project—the Severn River Homes Apartments recently completed at Annapolis, Md.—is another good example of the use of semi-prefabrication for today's defense housing.

For this type of building, DeWalt supplies the speed, the assembly cutting, the precision accuracy, so vitally needed.

This is what the mill superintendent of Arundel Land, Inc.—builders of the project—has to say about DeWalt on the job:

"We had 2 five h.p. DeWalts and 1 three h.p. DeWalt—two of them in constant use from the start of the job, the other kept running pretty regularly. We wouldn't use anything else. We had to cut about 200 *different* lengths of material (joists, studs, bridging—anything in the field) and we needed the precision and the versatile cutting of DeWalt. DeWalt is *solid* —no chance for anything but accurate cutting."

All builders today—interested in building single houses or doing multiple-unit jobs for defense or government housing, cantonments, etc.—should *plan* to have one or more DeWalts on the job. It's America's No. 1 "Builders Saw."

DeWalt is available in models ranging from ½ h.p. to 7½ h.p. Send coupon for complete information.

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Behind the fast-spreading acceptance of Prefabrication is the growing recognition of its basic advantages. Besides being an immediate answer to housing problems in critical defense areas, it is every day filling the needs of families everywhere for low-cost, modern homes—homes well built and designed for comfortable, gracious living.

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LIGHTWEIGHT tongs of magnesium contribute to easy handling of bricks

Produce Magnesium Tools For Masonry Trades

Plasterers' hods and darbies, hawks and featheredges, brick tongs, concrete wall forms, concrete block pallets and terrazzo strip have all been designed in magnesium to take advantage of chemical and physical properties of the metal which make it well-adapted to masonry uses.

Light weight is an outstanding characteristic of the manually-handled magnesium tools. The hod weighs only nine pounds. In addition, this tool is cast in one piece, eliminating leakage and allowing easy cleaning.

PLASTERERS' magnesium hod and hawk are also characterized by light weight

The plasterer's hawk, weighing only 1½ pounds, has been strengthened by the addition of an annular ring of magnesium, spot-welded to the magnesium sheet near the base of the handle. A sponge rubber cushion on the handle protects the plasterer's hand and contributes to ease of handling.

In the lightweight brick tongs, tension springs and tooth gears permit quick and easy adjustment for all types of bricks and make for safe handling.

Two types of darbies with magnesium working blades are being used, designed to give long wear with minimum danger of warping and cracking.

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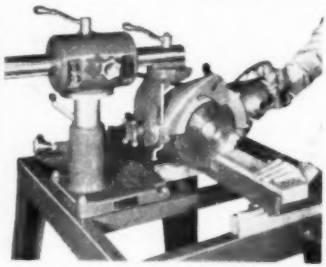
Your Electric Handsaw Can Be A Radial Saw

in less than a minute!

*Comet Radial Arm only $160.00**



* F.O.B. Los Angeles. (Less saw bracket and pressed steel legs).

Make your electric handsaw trim more studs, cut more rafters, and give more production per hour by mounting it on a Comet Radial Arm.

Designed to fit most electric handsaws, the Comet Radial Arm has a cut-off movement of 24", a bevel range of 0 to 45 degrees, and a miter range of 45 degrees right or left. Column adjustment is ample to take care of any stock your saw will handle. Takes less than a minute to attach or remove the handsaw. For further information and specifications, see your building machinery dealer or write:

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Put teeth in your selling by quoting small monthly payments, and close the deal on the spot. Small monthly payments will sell a lot of modernization, the easy-pay way . . . the ABC way—and you don't tie up working capital.

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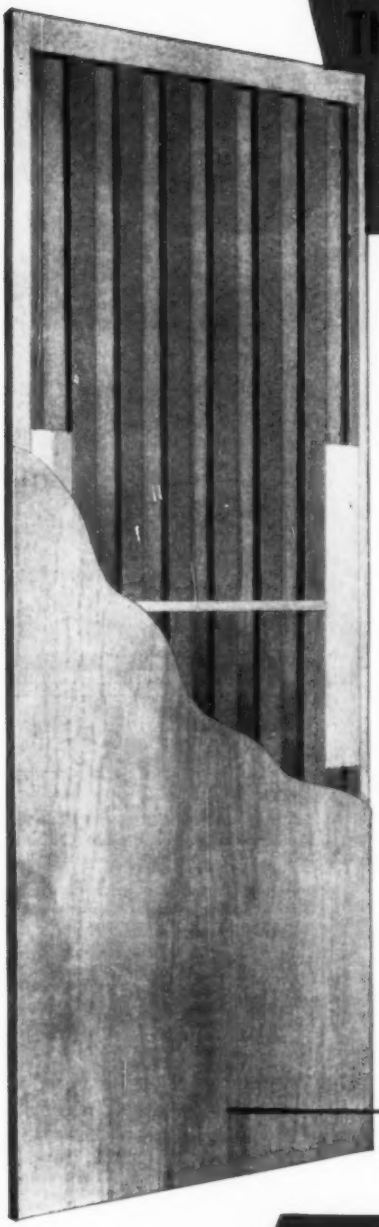

The HASKO "MOBILE" FLUSH DOOR with a "FLEX CORE"...

...has a simple, sound assembly for maximum strength and durability yet is made to meet the price market.

This adaptation of the hollow-core principle meets the demand for high quality and *low cost. This is another engineering achievement by HASKO for the builder who needs better flush doors.* It is truly an economy door of outstanding quality.

LOW COST The HASKO "MOBILE" FLUSH DOOR is priced competitively, and is made and backed by a responsible manufacturer.

QUALITY GUARANTEED The HASKO "MOBILE" FLUSH DOOR carries the same guarantee and responsibility as the famous Hasko Arch-Kor Flush Door. It features "balanced" construction, and the warp-resistant, sound deadening and proper ventilation characteristics engineered into all Hasko Flush Doors. Its frame is constructed of selected kiln dried lumber and allows a generous amount of stock for trimming, plus sturdy 3/16" thick face panels.

8-WAY HANGING SPEEDS INSTALLATION Large 3x25 (5x25 including frame) double lock-blocks provide for fast, easy 8-way hanging of the HASKO "MOBILE" FLUSH DOOR.

FLEX-CORE INCREASES LIFE, ASSURES PERMANENT BEAUTY The entire core construction provides complete support of the sturdy (3/16" thick) face panels. An additional feature of the door is in the use of the "Flex Core" core ribs. These provide a resiliency and flexibility that give the face panels an unusually high degree of resistance to denting from heavy impacts, or damage from warping, and assure great durability.

TESTED Thorough tests prove durability. The HASKO "MOBILE" FLUSH DOOR has withstood kiln tests of as high as 48 hours at 170 degrees. The Hasko name means sound construction, high quality, expert design and craftsmanship.

WRITE today for the special HASKO "MOBILE" FLUSH DOOR Bulletin. Orders will be filled in the sequence in which they are received.

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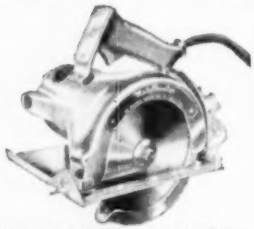
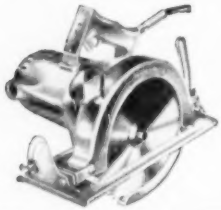
BRADFORD
ELECTRIC SAWS



Model 160 — 6" Saw
Vertical depth of cut 2"
Bevel cut at 45° : 1¼"
Net weight 10 lbs. 8 oz.



Model 180 — 8" Saw
Vertical depth of cut 2 29/32"
Bevel cut at 45° : 2 1/16"
Net weight 17 lbs. 8 oz.

These new 6" and 8" Bradford Portable Electric Saws are ruggedly constructed and fully powered to take on the *toughest* sawing jobs! They're better designed — inside and out — for easier handling, smoother sawing, more accurate work. You can *feel* the difference in the Bradford design!

And Bradford Saws are built to last. Ball bearings with permanent lubrication are used throughout. Gears are helical cut to give maximum driving power. A powerful 110 volt AC DC motor drives the blade with quiet, cool-running efficiency.

Own a new Bradford Portable Electric Saw — they're the choice of craftsmen everywhere. See your Bradford dealer for a demonstration. Write for bulletins giving specifications and prices.

THE BRADFORD MACHINE TOOL CO.

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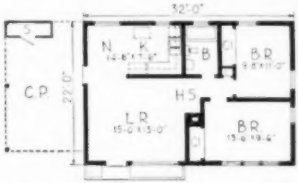
Precision since 1840

Unfinished, but Ready To Occupy, this House Sells for $4,950

Using a strong merchandising program, the Columbia Valley Lumber Co., Bellingham, Wash., found a fertile and practically untouched market—families which could afford only a small downpayment and low monthly payments—for this unfinished but ready-to-occupy, minimum-priced home.

The sales tag was $4,950 for the 700-square-foot, two-bedroom package, built on the buyer's lot. It is completely finished on the outside; plasterboard is applied to interior walls and ceilings, except for the second bedroom. The plasterboard is not taped or painted, and requires trim. A heater is not supplied.

MINIMUM-COST "Opportunity Home" of Washington lumber dealer is completely finished on exterior. Carport is extra



FLOOR PLAN is simple and convenient, with access to all rooms from hallway

All utilities are connected. Bathroom plumbing fixtures, an electric water heater and kitchen sink and cabinets are included in the sales price. There are unfinished hardwood floors in all rooms except kitchen and bath.

In addition to designing the house and arranging the financing, the lumber company handled the sales promotion, which made wide use of both newspaper and radio advertising. More than 2,000 persons visited a model home built by one of the company's contractor-customers, Elmer Lindquist. Twenty-two sales were marked up in a short time.

Materials needed to complete the interior of the house could be bought for about $400, the company estimated. The carport, with a good-sized storage area, added $720 to the cost.

YOUR PAINT DEPARTMENT WILL GROW around a **Red Devil** paint conditioner

It allows you to sell *more* than just a can of paint—you offer your customers *factory fresh paint* at no extra charge. And no stirring is required. The live-action of this patented conditioner as it puts pigment back to work is a regular traffic-stopper, so feature related Red Devil items near it and watch paint profits soar. Also your standard equipment for blending "store-mixed" paints.

Display this two-color decal to identify yourself with Red Devil's national advertising — the sign of fresh conditioned paint.

NO. 30 PAINT CONDITIONER
Red Devil's exclusive patented eccentric-action develops 700 vigorous shakes a minute. Thoroughly freshens paint in less than 2 minutes. Complete with automatic timer.
7964 See Your Jobber

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Irvington 11, N. J., U. S. A.

SUPERCEDAR

Brown's
RED CEDAR CLOSET LINING
Guaranteed
90% RED HEART 100% OIL CONTENT
NATIONALLY ADVERTISED

Brown's SUPERCEDAR is nationally advertised in House and Garden, House Beautiful and Small Homes Guide. Cedar closets help sell homes—help rent apartments.

PACKAGED SEALED

ALL WIDTHS 40' TO PKG.

Brown's sealed package protects the aroma and makes it easy to stock and sell at a good profit. Ready for use—dressed, tongue and grooved and end matched. Write for builders folder and consumer booklet.

Product of
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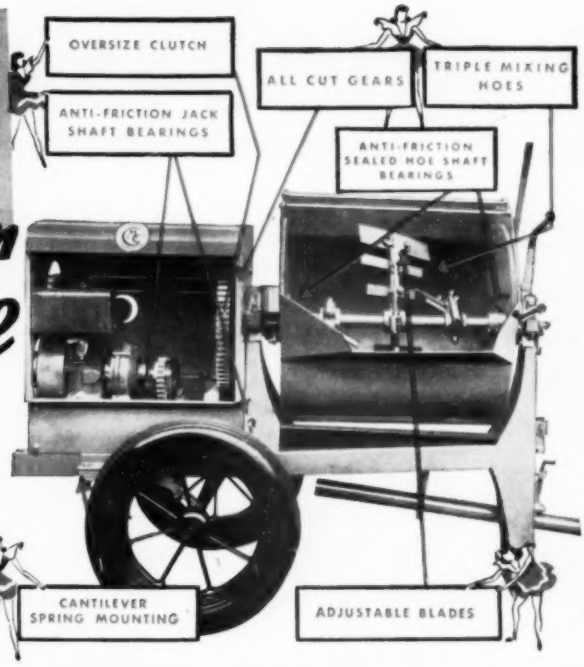
GREENSBORO, N. C. Established 1896
Largest Manufacturers of Aromatic Red Cedar in the world

HERE'S A *Deluxe* MODEL THAT'S *Deluxe* FROM STEM TO STERN!
IT'S *America's Biggest* HOE TYPE MIXER VALUE!

Wonder Deluxe

- Triple Hoe Action
- 6 cu. ft. capacity
- 31" width with caster type wheels
- Built-in safety grating
- Optional air or water-cooled engine



CONSTRUCTION MACHINERY COMPANIES, WATERLOO, IOWA, U. S. A.

CONTINENTAL MACHINES INC.

E·X·P·A·N·D·S

WITH

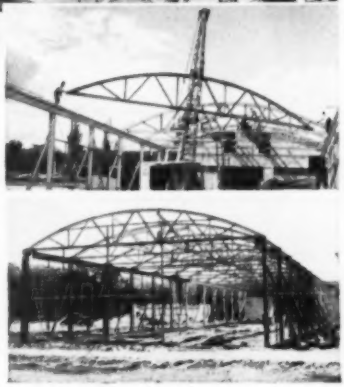
RILCO

Adds Additional Space . . . Fast

The first experience Continental Machines, Inc. had with Rilco clear span, post-free construction was back in 1949 when they expanded their Savage, Minn. Plant. This year when faced with the need for additional space they again selected Rilco glued laminated wood bowstring trusses.

Choice of Rilco was based on five counts: 1. Availability, 2. Low initial cost and maintenance, 3. Speedy erection without special equipment or labor, 4. Fire resistance, 5. Dependable Rilco engineering to solve problems of unusual loading conditions.

Whether you're interested in new construction, expansion or remodeling—find out how Rilco laminated trusses, arches or beams can economically provide unobstructed space and cut erection time and labor cost. Write today for details!



RILCO *Laminated* **PRODUCTS, INC.**
2511 First National Bank Building, St. Paul 1, Minn.

WOODALL

LAMIDALL®

a *true* decorative plastic laminate—

3 reasons why you'll like it—and want to use it!

1 It's **QUALITY**—A hard durable surface . . . structural $\frac{1}{8}$" thickness . . . beautiful wood grains*, patterns and colors in panels up to 4 x 12 ft. . . . resists stains, heat, hard blows and wipes clean with a damp cloth.

2 It's **VERSATILITY**—For 101 wall, ceiling *and* top surface uses . . . use it everywhere that you want the combined advantages of beautiful, long-lasting, maintenance-free surfaces.

3 It's **ECONOMY**—Although a genuine plastic laminate, Lamidall is priced in the range of low-cost, less-durable wall paneling materials . . . its structural strength and thickness permit simple on-the-job application.

Whether your jobs are new building or remodeling in commercial, industrial or residential work, you can use beautiful Lamidall in the many places you want the top quality of a true plastic laminate but at a price within the budget.

** A complete set of plastic laminated mouldings, of exact Lamidall wood-grain patterns, are available. They make possible the greater beauty of continuous wall decoration.*

FOR 101 WALL PANEL CEILING AND TOP SURFACE APPLICATIONS

commercial buildings

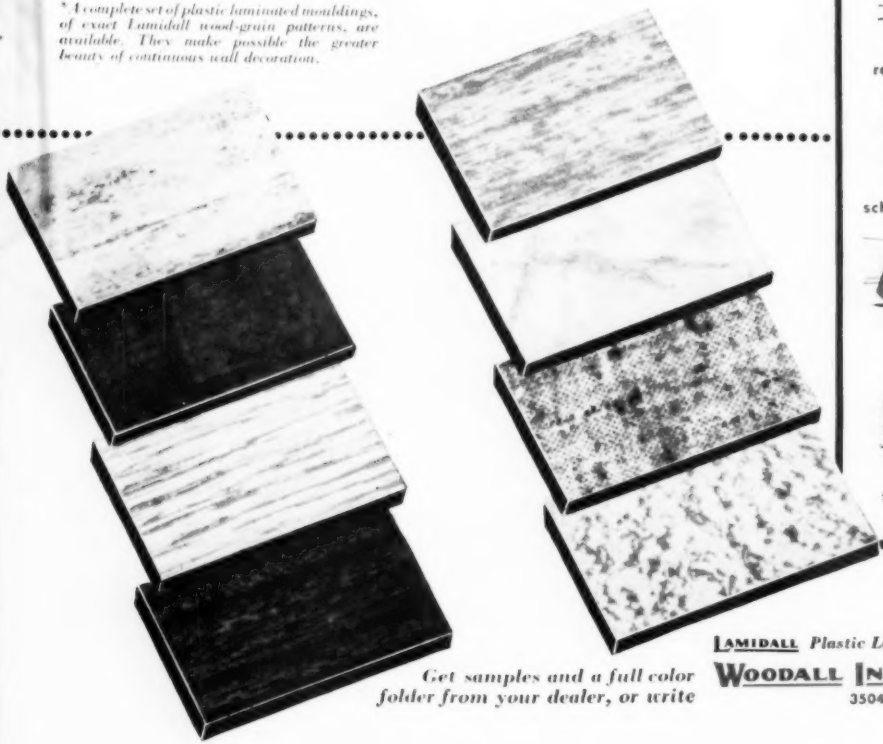
hotels—hospitals

restaurants—bars—clubs

schools—churches—theatres

kitchens—baths

stores—shops—offices



Get samples and a full color folder from your dealer, or write

LAMIDALL *Plastic Laminate is a product of*

WOODALL INDUSTRIES INC.

3504 OAKTON ST., SKOKIE, ILL.

WOODALL

Glide-All

sliding doors

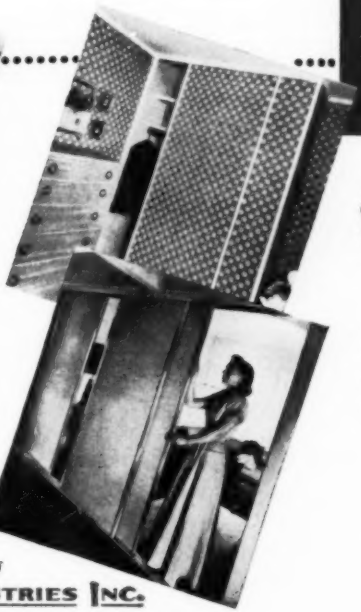
the answer to lower-cost wardrobes, closets — room dividers

- ***simple, low cost, floor-to-ceiling installation*** Eliminates framing, trim, plastering, electrical work usually needed for other wardrobes and closets.

- ***sturdy, dependable operation*** Woodall engineered Glide-All Doors are designed for smooth, quiet operation and long service. Their nylon rollers glide on aluminum threshold-type track—silent glides at the top are concealed behind the decorative valance of the upper track.

- ***modern, versatile decoration*** Made of Tempered Presdwood, Glide-All Doors may be left natural, painted, wallpapered or finished to suit the room decor.

- ***single and flush panels*** Glide-All Doors are available in standard single panels or flush type panels—both in floor-to-ceiling 8 ft. heights and 6 ft. 8 in. heights—in widths to fit most any openings.



install easy as A-B-C

A—Top track screws to ceiling.

B—Bottom track screws to floor.

C—Doors are mounted in tracks by simply inserting top panel in upper track, then lowering to set roller on floor track.

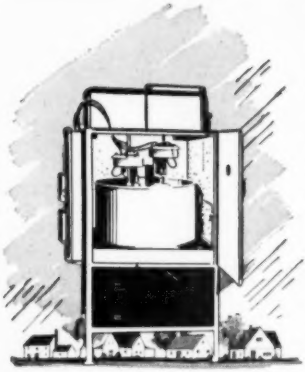
Write for literature giving complete details and specifications—or see Sweet's Files.

Glide-All Sliding Doors are a product of

WOODALL INDUSTRIES INC.

Plants in: CHICAGO, 3504 Oakton St., Skokie, Ill. • LAUREL, Miss., P.O. Box 673 • SAN FRANCISCO, 1970 Carroll Ave. • NEW YORK, Glen Cove Rd., Mineola, N.Y.

HOW BARRETT DUBLECOTE* will boost your roofing



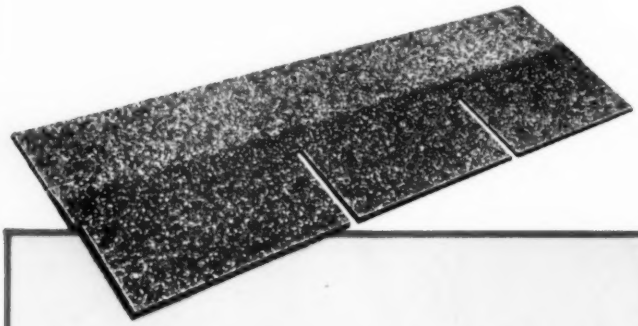
From basic materials to finished product—top quality all the way

It's no wonder that Barrett DUBLECOTE* MULTI-SHINGLES* are leaders wherever they're sold.

They're tough, sturdy three-tab strip shingles, reinforced with a second layer of asphalt and a second layer of mineral granules which extend from the lower edge of the butt to about 1½" above the cutouts. This double thick construction provides extra strength and protection where the wear is hardest, adds insulation and means better appearance, too, because it produces a solid effect with heavy shadows below the butts.

Only the finest materials are used in the Barrett DUBLECOTE MULTI-SHINGLES. The high rag-content felt is made in Barrett's own felt mills. The top quality asphalt with which it is coated contains a mineral stabilizer to insure maximum life. The mineral granules, in a variety of pleasing colors, are fire-proof, protect the asphalt against deterioration and provide lasting beauty.

Manufacturing processes are rigidly controlled and to assure uniform quality the shingles are regularly tested in the "Weather-Ometer" where they are subjected to extremes of heat, cold, light and rain that are far more severe than actual climatic conditions.



Barrett DUBLECOTE MULTI-SHINGLES specifications
they're handsome—they're sturdy

Size	Headlap	Exposure	Approx. Weight Per Square	Shingles Per Square	Bundles Per Square
12" x 36"	2"	5" or 4"	210 lbs.	80	3

Color range is rainbow-wide—solids, blends, pastels, grains

Barrett colors have been selected to meet every customer requirement. They're strong on sales appeal.

Plain Finish: Blue Black, Deep Green, Deep Red, Blue Blend, Slate Blend, Green Blend, Red Blend, Brown Blend, Two-Tone Green, Deep Brown, White.

Weathergrain Finish: Greengrain, Redgrain, Slategrain, Bluegrain, Browngrain, Pastel Bluegrain, Pastel Redgrain, Pastel Greengrain. Sample boards and natural color photographs available.

MULTI-SHINGLES* sales to new highs!

"The greatest name in roofing" An unmatched reputation works all the time for you

In the Barrett reputation, every Barrett roofing carries with it an asset unmatched by any other roofing manufacturer.

Year after year in important cities Barrett Roofs are selected to protect America's greatest buildings—buildings like the Empire State, RCA and United Nations Secretariat in New York, the National Archives and Lincoln Memorial in Washington, the Atomic Bomb Plant at Oak Ridge.

Barrett "know how" in roofings is a strong selling argument that inspires customer confidence in Barrett products. It's always good sense to tie in your business with "the greatest name in roofing."

Hard-selling national advertisements talk Barrett* roofs to 9,947,937 top prospects

Big, full-page color advertisements in The Saturday Evening Post and Better Homes and Gardens tell a powerful, convincing story of Barrett quality to home-owners. Another campaign in Successful Farming and Progressive Farmer blankets the big rural market for Barrett building products.

Nearly 10,000,000 top drawer prospects are *pre-sold* by Barrett advertising in two big markets for Barrett DUBLECOTE MULTI-SHINGLES*.

Advertising reprints and blow-ups are available to you so that you can tie in with Barrett national advertising.

Barrett sales promotion—turns prospects into cash customers

It is a recognized fact that Barrett sales promotion material is second to none in the field. Store, window and job signs, direct mail campaigns, local newspaper advertisements, window displays, full color product literature, selling manuals—these are just *some* of the selling helps that are available to build Barrett building material sales. Your Barrett representative will gladly show you this material.

To carry the Barrett name they've all got to be good

- Asphalt Shingles (lock-type and conventional)
- Roll Roofings (mineral surfaced and smooth)
- Insulated Sidings
- Rock Wool Insulation
- Sheathings and Building Papers
- Protective Paints
- Roof Repair Materials
- Wood Preservatives
- Saturated Felts
- Roofing Pitch and Asphalt

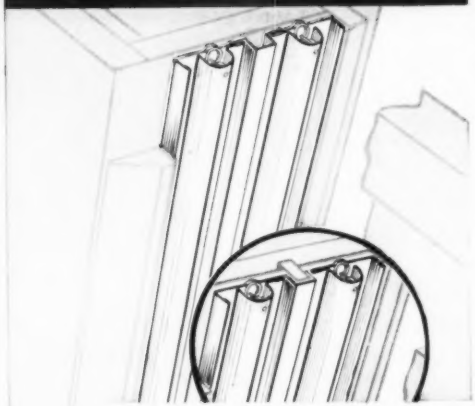
THE BARRETT DIVISION
Allied Chemical & Dye Corporation,
40 Rector Street, New York 6, N. Y.
36th St. & Gray's Ferry Ave., Philadelphia 46, Pa.
2800 So. Sacramento Avenue, Chicago 23, Ill.
1327 Erie Street, Birmingham 8, Ala.

Barrett

In Canada: The Barrett Company, Ltd., 5551 St. Hubert St., Montreal, Que.

*Reg. U. S. Pat. Off.

When Ordering Your Millwork
insist on
ALLWEATHER
BALANCE STRIP



Your double hung window assembly will be as modern as tomorrow if equipped with the Double Duty ALLWEATHER Balance Strip.

Double Duty because it provides dependable tongue and groove weatherstrip with maximum area of contact, plus positive counter balance of sash. Lifting springs are concealed without the use of sleeves or covers.

Two types of parting bead are available. Illustrated is the Metal Hat Type Parting Bead which provides a completely metal covered sash runway. No wood parting bead is required.

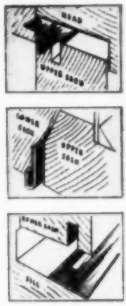
The inset view shows a Metal Parting Bead Cover to be used with conventional wood parting bead. Both eliminate the need for painting.

The ALLWEATHER Balance Strip is covered by U. S. Patents . . . Nos. 2,284,436-2,284,438 . . . other patents pending.

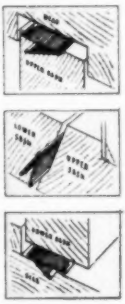
THESE FEATURES MAKE ALLWEATHER BALANCE STRIP OUTSTANDING

CROSS MEMBER WEATHERSTRIP INSTALLATION ALTERNATES

CROSS METAL EQUIPMENT "AC"



CROSS METAL EQUIPMENT "IB"



CROSS METAL EQUIPMENT "FH"

ALLMETAL
NAME ALLMETAL REGISTERED U. S. PATENT OFFICE
Weatherstrip Company
2243 N. Knox Ave., Chicago 39, Ill.

MEMBER WEATHERSTRIP Research INSTITUTE

ALLMETAL WEATHERSTRIP CO.
2243 North Knox Avenue, Chicago 39, Illinois
Please send complete information and prices.
Name
Address
City Zone State

Desert Caravan Inn, near Spokane, Wash.

Luxury Motel

Resembling a first-rate country club more than an auto court, this motel is outstanding for its guest comfort and safety features

Newest thing in travel accommodations is the small highway hotel, which aims to combine hotel comfort and service with the informality, quiet, and parking convenience of the highway auto court. Desert Caravan Inn, just opened outside Spokane, Wash., goes even further with a building of striking modern design that resembles a luxurious country club. Construction throughout, while economical, is of the highest standard, and puts special emphasis on materials with fireproof qualities.

Victor Louis Wulff, A.I.A., of Wulff & Bishop, Spokane, designed the building. General contractors were Walter G. Meyer & Son, also of Spokane.

It is a 2-story and ground floor air-conditioned structure, 60 feet wide and 170 feet long, with 47 bedrooms, a bridal suite, restaurant, bar, coffee shop, and lobby. By keeping the floor-to-floor height to nine feet, unnecessary cubage was eliminated without sacrificing the effect of comfortable ceiling height. The north end of the building, which is curved, was designed on a huge radius that swings out. The site, the spectacular view of the city and distant mountains, and handling of traffic easily as it comes off the main highway were all motivating factors in the design.

The building was laid out on a 12 foot module for efficient use of materials. Careful grading of the land made sufficient space available on the ground floor for 10 guest rooms.

Construction is basically reinforced architectural concrete with some exterior and interior brick trim. Cedar and birch paneling were also used in a number of rooms. Interior and corridor partitions are 4-inch and 6-inch lightweight block.

The roof deck is a 4-inch slab of structural concrete with a 4-inch fill

(Continued on page 202)

MAYBE A MAN FROM MARS

COULD SEE THE HIDDEN CONSTRUCTION OF YOUR HOME!

But . . . Customers Need Proof! Use

American Kitchens

to Prove Top Quality Construction Throughout!

Most customers have no way of judging the quality of internal construction. They don't have the X-ray eyes of a man from Mars—how can they recognize the built-in quality you feature?

Your prospects judge a house in terms of things they know . . . and they *know* a good kitchen from a cheap one! An American Kitchen spells high-quality . . . easily recognized . . . and prospects use it as a sort of measuring stick to judge the quality of the hidden construction as well.

It pays to feature American Kitchens. They are more economical because they give you more sales return per dollar, sell houses faster than any other brand. Builders from coast to coast use American Kitchens to add value to their homes. In addition, American Kitchens save money on labor costs because they are easy to install.

On your next project . . . feature American Kitchens and sell homes faster! Mail coupon at right today for free file.

AMERICAN KITCHENS DIVISION — AVCO — CONNERSVILLE, INDIANA

The high quality of American Kitchens is proof of the quality of the hidden materials all through the house.

American KITCHENS

SELL HOMES FASTER

Free to Builders—MAIL TODAY

American Central Division, Dept. AB-10
AVCO Manufacturing Corp., Connersville, Ind.

Please have my distributor send me your new 'Architects' and Builders' File.

Name_____

Address_____ Zone_____ State_____

City_____

Speediest

FOR SIDEWALL JOBS!

"Trouble Saver" Scaffold Brackets speed construction. Here's why they save you labor, time and materials:

Put them up and take them down faster than you can erect makeshift wooden scaffolding.

Fold compactly—light in weight.

Made of rail carbon steel—3' and 3½' lengths.

Nail, Studding and Bolt-attached types.

Attachments convert one type to any other.

Corner-type bracket also available.

Conveniently obtainable through offices and distributors from coast to coast.

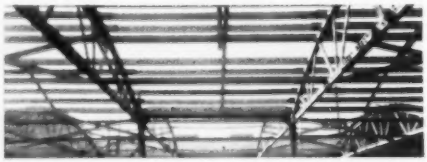
Write for CATALOG M

Used by thousands of builders. Write for free literature giving information on all "Trouble Saver" Scaffolding accessories.

Manufacturers of "Trouble Savers" ® since 1912

The Steel Scaffolding Co., Inc.

856 Humboldt Street, Dept. AB • Telephone EVergreen 3-5510 • Brooklyn 22, New York



BEST TYPE ROOF TRUSS

...2 WEEK DELIVERY!

Just 2 week delivery for Your new roof trusses. Most Practical, efficient design on today's Market. Low-cost. Used everywhere. Write

AMERICAN *Roof* Truss

1038 East 87th — Chicago

Est. 1922

AMERICAN BUILDER

is the Readbook of the Light Construction Industry

Luxury Motel

(*Continued from page 200*)

of vermiculite insulating concrete, 1:6 mix (1 part Portland cement to 6 parts vermiculite concrete aggregate). Over much of the building, the structural deck was designed dead level so that two or three more stories can be added at some future time. Proper drainage slopes were secured by varying the thickness of the lightweight vermiculite concrete, thus avoiding the introduction of a heavy dead load on top the slab. Over the ventilating and air conditioning ducts, the roof is frame construction.

Floors are concrete. Grade level slabs that carry wrought iron hot water radiant heat pipes were insulated with a 3-inch sub-slab of vermiculite concrete to reduce winter heat

CLOSE-UP of canopied main entrance shows its interesting construction details

loss to the ground and to protect floor coverings from summer condensation. Guest rooms, corridors, lobby, dining room, and stairways are carpeted; elsewhere, the covering is asphalt and rubber tile.

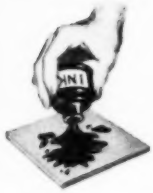
Windows are combination wood and steel casement units. Roll screens are an integral part of the window.

Continuous galleries on each side of the building are partitioned with cedar panels to give every room a private balcony. The cedar dividers do not quite reach floor level, and the concrete floors have a 1-inch pitch so the balconies can be readily hosed down. With their comfortable furniture, these balconies are immensely popular with guests.

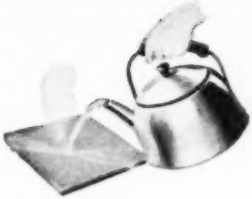
Every room has either a shower stall or a built-in tub with shower. Bathrooms, wainscoted with ceramic tile, were placed back to back, with access panels opening from the corridor.

Strong, bold color was used throughout: warm colors on the east

(*Continued on page 204*)

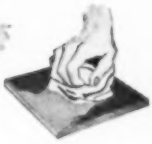


TILE IS STAINPROOF



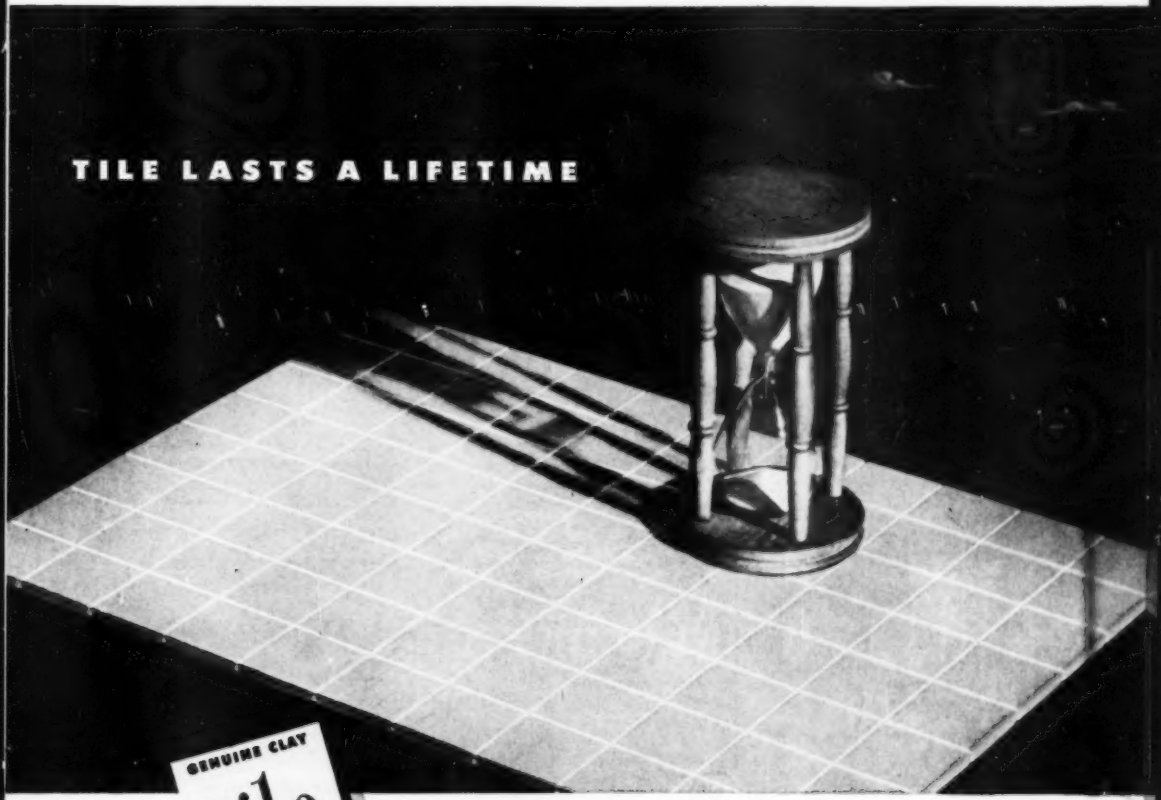
TILE IS WATERPROOF

TILE IS FIREPROOF



TILE CLEANS LIKE CHINA

TILE DEFIES SCRATCHING



ONLY GENUINE CLAY tile DEFIES ALL SIX!

When you specify Genuine Clay Tile in any installation, you immediately gain two things: (a) a permanent answer to your wall and floor surfacing problems, and (b) substantial long-range economies in maintenance. Consider, too, clay tile's known ability to resist heat, moisture, scratching, fading and staining. Genuine Clay Tile cleans as easily as a china dish and commands respect wherever it is used. Have you considered the use of clay tile lately in the kitchen, utility room, foyer, powder room or recreation room? It is worth a fresh appraisal every time you build or design any type of building. And remember, whether it is for modern or traditional styling, clay tile is one of the most flexible materials you can use in achieving distinctive patterns and color schemes.

The Council of America, Room 3401, 10 East 40th St., New York 16, N.Y. or Room 433, 727 W. Seventh St., Los Angeles, Calif.

PARTICIPATING COMPANIES:

American Encaustic Tiling Co.
Architectural Tiling Company, Inc.
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THE MODERN STYLE IS CLAY TILE

Pressure TREATED MATERIALS

A NEW Service to Your Industry

• PRESSURE CREOSOTED TREATMENT
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• Treated in our modern, new treating plant at Diboll, Texas. Write or wire for full information.

SOUTHERN PINE LUMBER CO.

MILLS: DIBOLL and PINELAND, TEXAS
SALES OFFICE: TEXARKANA, TEXAS

POLES TIMBER LUMBER PILING FENCE POSTS

Luxury Motel

(Continued from page 202)

side, cool colors on the west. Exterior walls on the east elevation are painted chartreuse; on the west, turquoise. The redwood-stained cedar balcony dividers make an effective foil for these colors. Twenty-six different shades were used in the building. Each room has its individual color scheme with carefully chosen harmonizing drapes, upholstering fabrics, lamps, and pictures.

Space-saving built-in furniture includes a luggage rack, desk, vanity table, and drawer cabinet. An unusual and extremely practical item is a small hinged ironing board that folds into a top drawer, which was designed by E. Norman Sylvester of the Wulff firm. All rooms are equipped with a refrigerated chest for ice cubes, baby formulas, etc; a telephone with 24-hour switchboard service, electric clock, free radio, and ample closet space.

The main dining room seats 90; the coffee shop, 35. A glass-enclosed charcoal broiler, where a guest can watch his steak prepared, is a feature of the dining room. Another interesting detail is the ornamental brick plaque on the north wall, showing in bas-relief a plan of the building, complete even to hand-made miniature room numbers of aluminum. Folding doors separate the dining room from the coffee shop; and a grill work partition between the dining room and the bar gives the latter semi-isolation.

The lobby is divided into an upper and a lower level. The lower one, on grade, is actually a registration lobby, where the glass-partitioned manager's office and the registration desk command an unobstructed view of the canopied main entrance. If necessary, the room clerk can converse with incoming guests through a window, making it unnecessary for them to alight from the car.

A short open stairway leads from the entrance lobby to bedroom corridors, so that guests arriving tired and travel-worn can get to their rooms without passing through the main, or upper lobby. The stairway railing and ornamental planting box at its base, the registration desk, and the lattice above it are all red cedar.

The carport unit lies parallel to the highway. From above, the thin concrete roof slabs look like the wings of an airplane. Concrete supporting columns, tapered toward the bottom, add further structural interest. Although the roof of the carport is not a continuous section, there is cover all the way into the inn, very convenient in bad weather.

WHY PUT UP WITH THIS

WHEN YOU CAN OPEN DRAWERS LIKE THIS

Fingertip drawer operation—so easy to achieve on built-ins with . . .

Roll-eez Trade Mark ROLLER BEARINGS for WOODEN DRAWERS

MAKES HOMES SELL FASTER!

Five styles. Roll-eez consist of durable plastic rollers mounted on steel pins and frames.

No tugging, no straining to open a drawer equipped with Roll-eez. Roll-eez prevent wooden drawers from sticking and binding—provide a smooth, quiet, effortless drawer operation — by eliminating wood-to-wood contact and maintaining perfect drawer alignment. Easy to install, they allow a simplified drawer construction and faster fitting of drawers, generally save enough in time, labor, and materials to make up their small cost. Durable, long-lasting, Roll-eez increase the value of your homes.

Write for Literature Today!

JUNIOR-PRO PRODUCTS CO.
3206 Morganford Rd., St. Louis 16, Mo.

DAMP-VENT

PREVENT MOISTURE DAMAGE

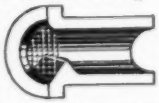
Let Your House Breathe

Damp Vents — small breathing units — eliminate moisture condensation in modern tightly-built homes.

PROTECTS PAINT AND INSULATION FROM DAMPNESS

The Vents allow the exchange of moisture through walls without creating free-air circulation . . . keeps walls dryer. Damp Vents are made of rustproof aluminum or acetate tenite plastic. Built-in rain blocks and 30 mesh copper screen that keeps insects out but won't clog.

Patent applied for



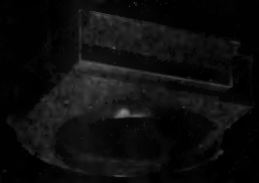
EASY TO INSTALL

Simply drill 3/4" hole in siding. Insert Damp Vent.

Ask for Damp Vents at your local paint, hardware or lumber dealer . . . or write direct to company.

DAMP-VENT CO.
Bettendorf, Iowa

In Electric
Exhaust Ventilators
THIS ISN'T ALL



The entire unit fits flush with the finished ceiling or wall.

"The blade's the thing"

The motor is rubber mounted to insure quiet operation.

Only the attractive, chrome-finished grille is visible.

Blo-Fan's Blade is *Out of this world!!!*

That's right—the Blo-Fan blade is "out of this world" in design, construction and performance . . . Unusual design of Blo-Fan's blade is the secret of its superiority. The fan portion scoops up large volumes of air while the blower element expels it with great power . . . Made in one piece and dynamically balanced, Blo-Fan's blade is the result of 26 years of experience in manufacturing home ventilators . . . Blo-Fan operates at a moderate, quiet speed, moving more air—quickly, quietly, with greater efficiency.

SPOT VENTILATION AT THE POINT OF AIR POLLUTION.
For Kitchen, Bath, Game Room and Laundry.

3 SIZES—with Blo-Fan you have a choice of models, depending on room size and air change required. Specify by model number to insure the *right* Blo-Fan for the job.

ANOTHER *Blo-Fan* EXCLUSIVE

9-Speed Switch

This 9-speed switch is an exclusive feature on Blo-Fan Model 210 . . . At low to medium speeds, Blo-Fan easily handles the normal volume of steam and fumes, but in emergencies (like burning the toast) a higher speed will clear the room immediately.

Blo-Fan AMERICA'S MOST IMITATED HOME VENTILATOR

PRYNE & CO. INC. BOX B-22, POMONA, CALIFORNIA
Manufacturers of Pry-Lites, the original recessed lighting fixtures with snap-on frosts.
EASTERN FACTORY: NEWARK, NEW JERSEY
WAREHOUSES: LOS ANGELES, SAN FRANCISCO, CHICAGO, ATLANTA

*Trade Mark Reg.

NEW

MEYER B1 LO-BOY
5 in 1 FURNACE

Here's the furnace contractor-builders have been waiting for!

It's really five furnaces in one...engineered to burn oil or gas equally efficiently. Burners for natural or LP (bottled) gas, dual gas (natural to LP), combination gas-oil, high pressure oil or vaporizing oil available...EASILY CONVERTED FROM OIL TO GAS with no sacrifice of efficiency!

PERFORMANCE DATA

	B1 110G (Gas)	B1 105P (Pressure)	B1 96V (Vaporizing)	B1 110GG (Dual Gas)	B1 120VG (Combination Gas-Vaporizing)
Input Btu/hr	110,000	131,000	120,000	110,000*	120,000
Output at Bonnet Btu/hr	88,000	105,000	96,000	88,000*	96,000
Air Delivery at 85° TR and ¼" S.P. ext. cfm	960	1140	1050	960	1050

*Figures range from ... to ... depending on the fuel used

WEIR-MEYER—the pioneer company in steel furnace manufacture—presents a new product of advanced engineering...

MEYER B1 LO-BOY FURNACE

Here's a furnace which surveys show is the right size for 83.6% of the homes planned for 1952. And it's engineered to handle any of the five different type gas and oil burners with all the standard-setting qualities and performance that have made WEIR-MEYER famous! Send for information on this and other leaders in the Weir-Meyer line of 114 furnaces and burners.

Bottom View

EASY TO INSTALL!

Comes factory-assembled. A heavy-gauge base pan eliminates building a base and cementing unit to floor! Just 25" wide x 48" high x 58" long, this Lo-Boy goes through the average doorway easily. Heavy skid rails make it easy to move even when uncrated.

THE MEYER FURNACE CO., PEORIA 2, ILL.

Manufacturers of Weir & Meyer Furnaces - Air Conditioners for Gas-Oil-Coal
Factories: Peoria and Peru, Illinois

WEIR-MEYER FURNACES—AIR CONDITIONERS

Self-employed Persons New Under Social Security

On the first of January 1951, nearly five million self-employed people were brought under Social Security. While their earnings began building towards Old Age and Survivors Insurance on that date, to many their rights and responsibilities under this newly extended protection were not immediately apparent. Undoubtedly, it is due to the fact that the self-employed have no immediate obligation to fulfill and many of them are not yet aware of any obligation at all. Many may not yet realize that their self-employment work is covered by the law; others do not realize that if their kind of trade or business is covered, they automatically, are covered. There is no option in the matter.

The question, what kinds of self-employment are covered, is best answered by listing the comparatively few occupations that do not count towards Old-Age and Survivors Insurance protection. Farm owners or operators are not covered. Neither are people who work for themselves as physicians, dentists, osteopaths, chiropractors, naturopaths, veterinarians, Christian Science practitioners, public accountants, funeral directors, architects, or professional engineers.

Every other type of enterprise is covered by Social Security and those who are self employed in such trades or businesses are affected by the new Law.

An individual who is self-employed in an excluded occupation may become eligible for Old-Age and Survivors Insurance if, apart from his non-covered profession or business, he engages in other work, either as an employee or as a self-employed person, which comes under the Social Security Law.

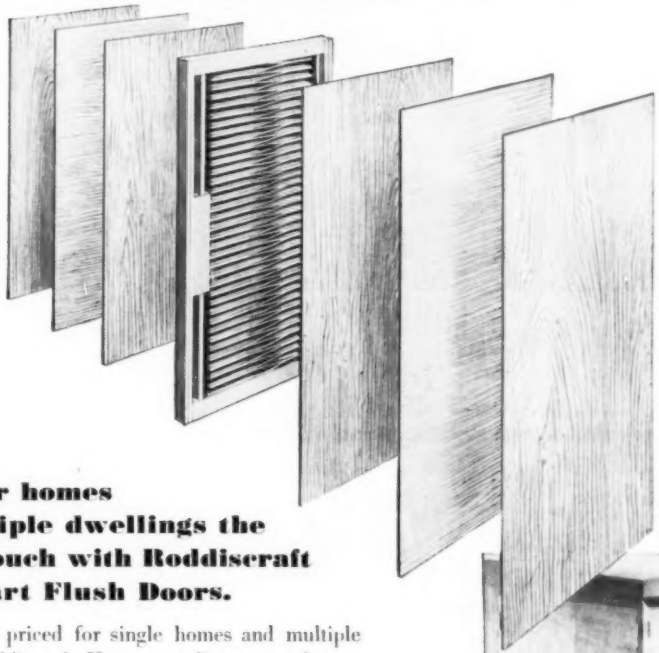
The self-employed individual under Social Security will have the same rights as the employed individual covered by the law. When he retires at the age 65, or at any time thereafter, he and his family will receive insurance benefits. No matter what his age at the time of his death, however, his survivors may be entitled to payments.

For Old-Age and Survivors Insurance purposes, a "self-employed person" is one who is sole owner or partner in an unincorporated trade or business. And, for the same purposes, self-employment income, subject to certain exceptions, means net earnings derived from a covered trade or business during any taxable year beginning after 1950. The minimum net yearly earnings reportable are $400;

(*Continued on page 208*)

Roddiscraft
7-Ply Construction

Means the Finest in Lightweight Flush Doors...at modest cost



Give your homes and multiple dwellings the quality touch with Roddiscraft Housemart Flush Doors.

Designed and priced for single homes and multiple dwellings, Roddiscraft Housemart Doors are the answer to today's trend and preference for flush doors.

Roddiscraft 7-ply construction gives you the finest hollow-core door—greater strength—greater resistance to distortion. 3-ply face panels insure against core pattern "ghosts."

Roddiscraft Housemart Hollow Core Doors are priced to bring you business—quality built to bring you the repeat business.

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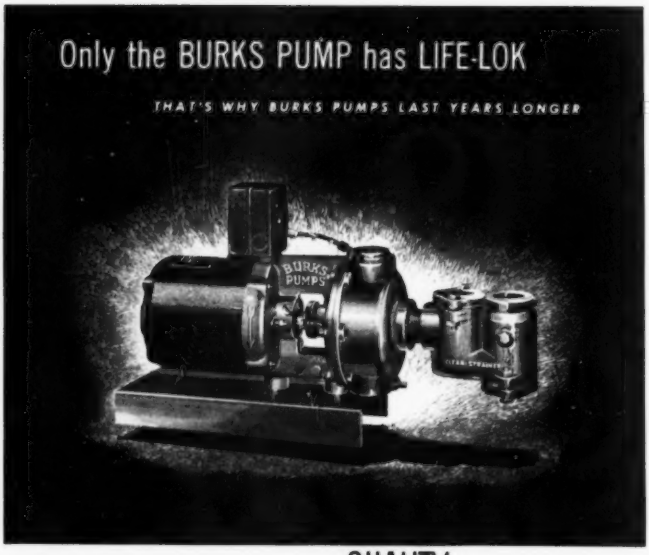
THE FORESTS...THE FACILITIES...THE EXPERIENCE TO PRODUCE THE FINEST



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Design now available in Greater Supply!

Improved delivery schedules are now being maintained in the shipment of patented Dur-O-wal . . . the trussed design reinforcing member which gives masonry walls a backbone of steel.

Masonry walls reinforced with patented Dur-O-wal are built for lasting performance. Trussed design means permanent beauty, scientifically designed protection from cracks. Lays fast, economical, ideal for all masonry construction.

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Cedar Rapids, Iowa

DUR-O-WAL PRODUCTS, INC.
P. O. Box 628
Syracuse 1, N. Y.

Self-employment Persons

(*Continued from page 206*)

the maximum net yearly earnings, together with wages, which can be credited to a Social Security account are $3,600.00. In case of a partnership, each partner will include in his net earnings his distributive share of the ordinary net income from the partnership enterprise.

The self-employed individual is in the position of both employer and employee. However, unlike the employee in a job covered by Social Security, he must report his own self-employment income and remit the entire contribution on his insurance.

The report on a self-employed person's income will be coordinated with his income tax return. All that he will need to do is to transfer certain information from the trade or business schedule of the return to a Social Security schedule on the same return. The amount of Social Security contribution for self-employed persons for 1951, will be 2¼ per cent of the self-employed income.

Self-employment income must be reported for every taxable year beginning after 1950. The first report will be made after the close of 1951. Before the time of filing the 1951 income tax return (in 1952) every one of the covered self-employed will need a Social Security account number. If the self-employed person has never had a card, or has had one but lost it, he should contact the Social Security office which serves his area.

Every Social Security office has informational literature dealing with the self-employment provisions of the New Social Security. This material explains fully the rights and obligations of the person who works for himself in any one of the thousands of trades, businesses, or other gainful occupation covered by the Law. It is important that the self-employed person, no less than wage earner, know what this newly granted protection means to him and to his dependent families. He should realize that, in common with the salaried employee, he is now building towards his own Old-Age and Survivors Insurance under Federal Social Security.

SOME FACTS . . .

There were nearly 46 million dwelling units in the United States in 1950, an increase of 8,550,000 or 23 per cent over 1940.

Over 53 per cent of all homes are owner-occupied. New York and Chicago have the lowest proportion of owner-occupied homes in the country; Youngstown and Akron, Ohio have the highest.

You'll build and sell faster with Westinghouse micarta® panels

Now you can install attractive MICARTA® Laminated Plastic work surfaces at a big saving in time, trouble and material. These convenient Westinghouse MICARTA panels are pre-bonded to Weldwood plywood panels—delivered to you ready to cut to size. You eliminate the bother of bonding, the need for special expensive tools. MICARTA can be sawed, drilled, trimmed and planed by any carpenter. It cuts with a minimum of waste, too.

Once you install MICARTA its warm colors and patterns will work to help you sell homes faster. Women will appreciate the fact that it never requires maintenance. It stands up forever against food, alcohol, ink, oil—even boiling water! It resists denting, scratching, chipping, and burning. The super-smooth surface can be cleaned to a gleam with a wipe of a damp cloth.

The easily installed panels come in four sizes . . . 24" x 96" . . . 48" x 96" . . . 30" x 60" . . . 30" x 96" (all ⅞" thick). Ask your lumber dealer about MICARTA. For further information on this modern material fill out the coupon below.

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Quiet... JUST ABOVE A WHISPER!

WASTE KING
Pulverator
with exclusive "Hush-Cushions"

Specify the only garbage disposer with built-in "Hush-Cushions" that prevent noise and vibration from penetrating sink tops, walls and house plumbing.

Hundreds-of-thousands of Waste King Pulverators are in daily use throughout America in homes and apartments of every size and type.

Compare these exclusive Waste King features!

Lifetime Grind Control, prevents clogging Hush-Cushions for quieter, smoother operation. Preferred continuous-feeding, no stopping to reload. Can be used with either septic tank or sewer systems.

Takes all garbage without separating.

3 MODELS

for home use

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restaurants
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Specified by [illegible] Architects and Builders [illegible] any other brand.

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"WITH SPECIAL GRIND CONTROL"

Free information and literature. No obligation!
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1250 Wilshire Blvd., Los Angeles 17, Calif.
Send literature about the new Waste King Pulverators.
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Builders' Conference at Purdue Set for Feb. 18

The fifth annual Residential Contractors' Conference will be held at Purdue University February 18 and 19. The meetings are sponsored by the University in cooperation with several Indiana chapters of the National Association of Home Builders.

On the first day's program will be a discussion of septic tanks, their installation and capacities; a talk on soil mechanics from the layman's point of view; and a discussion of rent control, materials control and pricing.

Included on the second day's schedule will be talks on heat distribution systems, with emphasis on the use of crawl space under basementless houses as an open plenum, which saves the metal normally used in duct work. The final topic will be a discussion of color dynamics, covering interior and exterior decorations and lighting effects.

All contractors interested in home building are invited to attend. Inquiries about the conference should be addressed to M. M. McClure, Technical Extension Division, Purdue University, Lafayette, Ind.

Urges Economic Surveys As Guides for Zoning

Too many zoning plans in American cities have been prepared without reference to economic considerations, according to the Urban Land Institute.

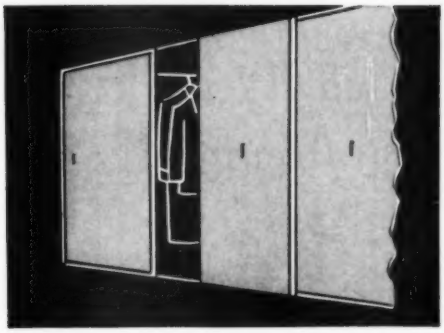
In an article called "Economic Surveys as a Basis for Planning and Zoning," a feature of the November issue of *Urban Land*, Dr. Homer Hoyt, nationally known urban land economist, says that in the past, physical surveys of existing land uses were made prior to the establishment of the zoning plan "with a liberal allowance added for growth of the higher and better uses."

The result, according to Hoyt, is long stretches of commercially zoned land remaining vacant and at the same time tax delinquent, a dead loss to the owners and yielding no tax revenue to the city.

Early studies of the number of front feet or square feet of land needed for retail uses were based on surveys of land actually used. Hoyt said, this being satisfactory where all families in a given area make all their purchases in the same area. However, where residents of suburban towns in a metropolitan area buy most of their department store, clothing and furniture items in the central retail district, the footage method is ineffective.

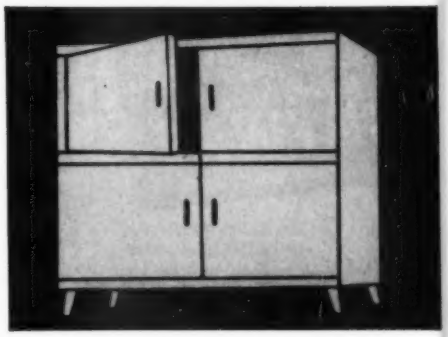
You've been waiting for

novoply*



for Sliding Doors and Partitions...and Cabinet Doors!

Here's why:



NOVOPLY...the completely new and different wood paneling...solves a problem that could never be solved adequately before: ***the sliding door and sliding partition problem.***

Novoply solves this problem because:

it is the flattest paneling ever produced ...virtually warp-free!

It is light in weight . . . spectacularly beautiful.

And perhaps the most amazing thing about Novoply is this: with *all* its advantages, it is surprisingly LOW-PRICED!

You can have Novoply — and *like* it — any way you want it . . . natural, stained, painted, veneered.

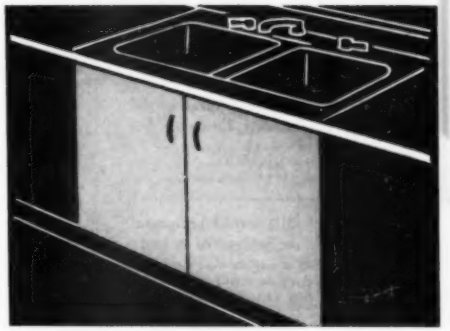
It is easily worked by ordinary woodworking tools. Can be sawed, screwed, planed.

So investigate Novoply . . . not *only* for sliding doors and partitions . . . but also for wall paneling, furniture, really distinctive built-ins.

Maybe you can think of *other* ways to take advantage of Novoply, too.

Send the coupon today for a sample and descriptive booklet.

*T. M. Reg. Patented; Other patents pending



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Weldwood® Plywood, Weldwood® Doors and Other Wood Specialties
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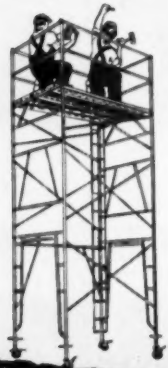

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Only Master Welders work on SAFWAY Equipment

Interchangeable parts constructed by safe, strong, lifetime welding of high carbon tubing.

All SAFWAY Equipment Treated with Rust Inhibitor

Maintains accurate fit of parts and fasteners to assure safe, rigid maintenance towers.

Enamel is Baked on All Surfaces, Inside and Out

Improves appearance of equipment—helps insure lasting fit of parts and long life.

All SAFWAY Equipment is Engineered to Last

With only routine care, Safway equipment will deliver a lifetime of safe, efficient service.

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STEEL PRODUCTS, Inc.
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Tubular Steel Scaffolding and Equipment

Seek More Living Units For Military Personnel By Big-Home Conversion

A project to encourage large-house conversions, prompted by the need for additional housing units near military and defense installations, plus increased interest in the remodeling market, has been launched by the Tile Council of America.

The council recently sponsored a conference in Boston to start "Operation Family Reunion," a plan to enlist private owners of large "white elephant" dwellings in a conversion campaign. The project was undertaken specifically in behalf of the military as one way to produce additional living units for servicemen's families.

High-ranking officers of the Army, Navy and Air Force endorsed the plan. Others participating in the meeting were housing representatives of Federal, state and local governments.

An estimate that there are about 23,000,000 large, older houses in the country which are at present a financial drain on their owners was made by Roy W. Schweiker, chairman of the council. He said that conversion to smaller units, principally through the addition of bathrooms and kitchens, would make these income property.

Full cooperation of the Office of Rent Stabilization has been pledged for the conversion project, Schweiker said. These are the three steps in the program, according to Schweiker and Tighe Woods, ORS national director: (1) a home owner gets the aid of a builder, architect or materials contractor in setting an estimate of conversion costs; (2) this estimate is taken to a local ORS board for a "prior opinion" on equitable rentals; (3) the local bank or other authorized lending agency arranges financing.

Redwood, Douglas Fir Area Has 600 Sawmills

There are more than 600 sawmills and other wood-using plants in California's redwood and Douglas fir regions, with a forest of nearly 3,000,000 acres and an estimated saw-timber backlog of 48 billion board feet. Arnold F. Wallen, consulting forester, said at a recent meeting of the Western Forestry and Conservation Association in Portland, Ore. Quoting Federal forest survey figures adjusted from 1946, Wallen estimated the California redwood region's commercial forest area at 1,672,000 acres with 36,092,000,000 board feet of virgin saw-timber and California Douglas fir region at 1,162,000 acres with 12,491,000,000 board feet of timber.

ALLITH 50-50 PUSH-OVER GARAGE DOOR HARDWARE

Easy to Install . . . Lasting Satisfaction

Combine the expertly-designed Allith garage door hardware with your own or any standard door. Result . . . a rugged, easily-operated overhead door that gives full and lasting customer satisfaction.

Quickly installed, standard set fits any opening up to 9′ wide x 7′6″ high when doors do not exceed 275 lbs. Other sets available for openings up to 10′ wide x 10′ high.

ALLITH-PROUTY, INC
DANVILLE, ILLINOIS
In American Builder for Forty-Five Years

NOW! ONE SAW makes every cut in every house

You no longer need both a light saw and a big saw to make **every** cut in every house! Now, *one saw does it!* The MAXAW 70 with **magic pivot** combines light weight with full cut through 2-in. dressed lumber *with blade to spare.*

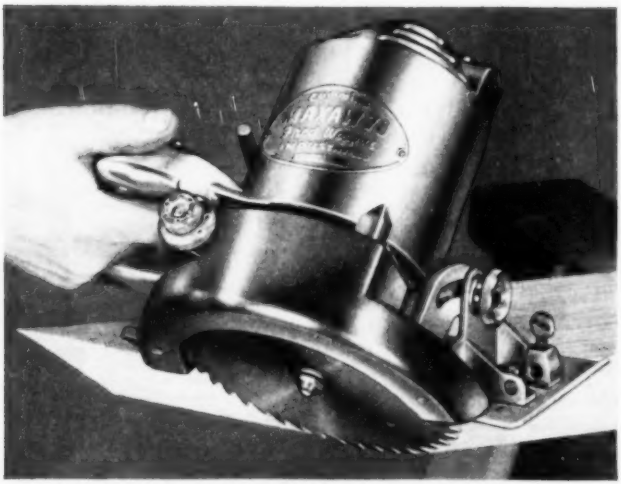
magic pivot does it! This exclusive, simple engineering principle, long overlooked, puts the pivot point closer to the saw shaft, steps up performance with:

- deeper cuts at 45° than any other saw, on any dollar for dollar, pound for pound comparison!
- blades last twice as long; hard biting *stub-radius* blades take 3 to 4 more sharpenings, still hold full cutting depth at 45°.
- more power at the cutting edge — faster work
- total weight of only 10 lbs., — 5 to 8 lbs. less than equal quality heavy duty ball bearing saws

Ask for the **magic pivot** MAXAW 70 today — it's your king size saw value. Now at all MAXAW dealers.

magic pivot

NEW *Fred Wappat*



MAXAW 70, Heavy Duty. All Ball Bearing Industrial Quality— Cuts 1⅞ in. at 45°; 2¼ in. straight.

makes all your rafter cuts

including common hip, valley and cripple

MAXAW 70

FOR ONLY $69.50

GET THIS FREE PLYWOOD AND LUMBER FOOTAGE CALCULATOR

Here is something every man who cuts lumber needs to help him do faster, more accurate work. Sent free on request.

OTHER magic pivot MAXAWS for Heavier Duty Work

MAXAW 80
2-3/16 in. at 45°
2-5/8 in. Straight

MAXAW 90
2-3/16 in. at 45°
2-5/8 in. Straight

MAXAW 110
2-13/16 in. at 45°
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Here's the story of what Calcium Chloride will do for cold weather concrete construction! You can step up cold weather schedules, reduce costs,—lengthen the pouring day,—cut costly protection time in half,—reduce or eliminate overtime finishing with the addition of Solvay Calcium Chloride to your concrete mix. For details, send for "The Effects of Calcium Chloride on Portland Cement," a 48-page semi-technical book—giving details of carefully controlled tests made in the field and in the laboratory.

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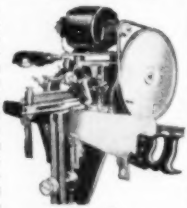
Read what Elmer L. Warn wrote us: "I have operated a Foley Saw Filer and a Retoother for over two years. I am a carpenter. When it will be hard for me to throw a hammer and push a saw, I will have a shop that will make me an easy living. I call these machines my old age insurance, and they are paying for themselves as we go along."



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Foley Saw Filer

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Send Free Book "MONEY MAKING FACTS"
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Bandshell Built for Less than $5,000

This bandshell, with a capacity of 40 to 50 performers, their instruments and equipment, was completed by the city park department in Stillwater, Minnesota, at a cost of less than $5,000.

Materials included concrete blocks for the foundation and decorative

BANDSHELL for city park department, Stillwater, Minnesota, accommodates 40 to 50 performers

pillars, and asphalt roofing, lapped. Framing consists of built-up rafters.

One-fourth inch Tempered Presdwood, made by the Masonite Corp., was used as an inside lining, with 1x4 matched and beaded ceiling. Tempered Presdwood was also used for the face of the exterior arch.

Designed by Wendell Beardsley, architect for the Central Lumber Company, the bandshell was built of materials supplied by the Bluff City Lumber Company, an outlet for Central.

Kawneer Products Not Affected By NPA Directive

The Kawneer Company states the NPA revised regulations (NPA Order M-4A, CMP Reg. 6, Dir. 1) place no new restrictions on the manufacture, sale or use of its products.

According to Kawneer, "The regulations govern the use of Mill and Class 'A' products and do not include Class 'B' products. Under the Controlled Materials Plan, our materials are classified as Class 'B' products and are not affected by these new regulations. This point has been verified in an opinion given to us by NPA representatives in Washington. Consequently, store front construction, entrances and other materials of our manufacture may be sold and installed on any permitted construction and the weight of these Class 'B' products does not have to be included in Section 70 of the CMP-4C application form."

This refers only to the above mentioned directive.

NOW! EARN BETTER PAY THIS EASY WAY

CARPENTRY ESTIMATING

Quick . . . Easy . . . Accurate with this simplified guide!

You can earn higher pay when you know how to estimate. Here is everything you need to know to "take off" a bill of materials from a set of plans and specifications for a frame house. Saves you time figuring jobs, protects you against oversights or mistakes that waste materials and cost money. Nothing complicated—just use simple arithmetic to do house carpentry estimating with this easy-to-use ready reference handbook:

"SIMPLIFIED CARPENTRY ESTIMATING"

Shows you, step by step, how to figure materials needed for (1) foundation, (2) framing, (3) exterior finish, (4) interior finish, (5) hardware, and (6) stairs. Gives definite "take-off" rules, with many helpful quick-reference tables and short-cut methods that simplify the work.

SPECIAL FEATURES: Lumber Checking List. Millwork Checking List. Hardware Checking List. Materials Ordering Information. Quick-Figuring Tables for estimating concrete footings and walls, concrete piers, window frames, door and window areas, sash weights, nail quantities. How to figure labor hours per unit of work. Rules for linear, area and volume measurement. Mathematical reference tables, including decimal equivalents, lumber reckoner, conversion of weights and measures, etc.

TURN TO CHAPTER 8 and see the "Estimating Short Cuts" for quick figuring of board footage. Here are *simplified* ways to estimate lumber needed for floors, walls, ceilings, roof, door and window frames, inside trim for these frames, inside trim for inside doors, and drawers and cabinets. *This chapter alone can be worth the entire price of the book to you!*

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Just fill in and mail coupon below to get "Simplified Carpentry Estimating" for 10 DAYS FREE TRIAL. If not fully satisfied, return the book and owe nothing. If you keep it, send only $3.50 plus few cents postage in full payment. You take no risk. Mail coupon now.

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"Plastic House" Built for $5 Per Square Foot

WALLS AND ROOF of this home are vermiculite asbestos; plastic is used throughout

The "world's first plastic home" has been built in California at a cost of $5.02 per square foot, according to the owner, W. D. Barton of Danville, in the San Francisco area.

Cost of the home, custom-built with 11 rooms, three baths and a two-car garage, was listed as $16,445. Square footage is approximately 3300. The same construction principles apply to smaller homes, Barton said, the chief economy factors of the plastic house being wall and roof construction. Two-inch-thick laminated vermiculite asbestos panels are used for both walls and roofs. Nailed and cemented to wood studs, the panels can serve as both interior and exterior walls, and as roof and ceiling.

Barton House Cost Breakdown

Excavation, foundations, slab	$ 740
Heating assembly	820
Walls and roof	3250
Plumbing	1475
Electrical	1106
Glass	475
Cabinets	465
Brick (wal and 2 fireplaces)	1800
Finish labor	1237
Paving, Fill	280
Finish Materials, Doors, Hardware, etc.	3739
Miscellaneous Labor	1058
Total	$16,445

The plastic material was said to have excellent insulating qualities and to be fireproof, mildew-proof, termite-proof and warp-proof. The construction has been approved by FHA.

Barton's home is built on a concrete slab, to which asphalt tile flooring is applied directly. For heating—cooling, plastic pipes carry warm or cool air between two concrete tunnels running lengthwise under each side of the floor—a combination radiant-perimeter system. Registers are located in every room.

Another plastic used extensively is a fibre glass product, Alsynite. This

(*Continued on page 216*)

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"Plastic House" . . .

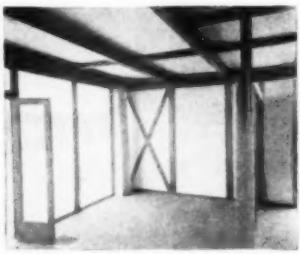
(*Continued from page 215*)

translucent material, in aquamarine, rose, blue, maize yellow, green and a clear tint, has several decorative and functional applications—in windows, roofs, shower curtains and lighting fixtures. The maize fibre glass which, Barton says, transmits the full spectrum of the sun, forms a clerestory window that runs the full length of

INDOOR DINING ROOM seen from living room. Clearstory window at top, made of maize-tinted fibre glass, runs the full length of house, lighting hall and all rooms

the home, just over the center hall. The entrance patio roof is rose fibre glass.

Other uses of plastic are for bathroom walls, cabinets, kitchen table top and counters, and wooden cupboards. Samples are shown of interior wall finishes, in birchbark, limed oak,



MASTER BEDROOM, with dressing room at right. Outside porch has canopy of green fibre glass which owner says filters out hot sunlight to give ample light without glare

walnut and granite patterns. Barton says each is durable, scuff-proof and can be easily cleaned with a damp cloth. A clear plastic paint covers all woodwork.

Floyd Comstock, Walnut Creek, Calif., architect, designed the home, and Herb Martin, Danville, was the builder. All plastics were supplied by Consolidated Plastics, Danville.

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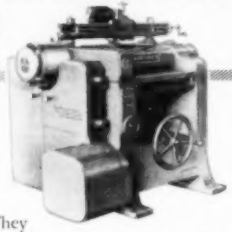

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DETAIL of "Shadow-Lock" application on re-siding job. Since hook-head nail does not penetrate shingle, breakage is minimized

PRECEDING COURSE of siding shingles has been inserted into channel and workman places top leg of another channel over top edge of shingles to receive next course

of hook-head nail, gives bracing strength, and self-alignment. The channels also give deep, horizontal shadow lines. Here's how the system goes up:

(1) Nail Gypsum sheathing directly to studs (in new construction), with end joints staggered. Begin first course by attaching a wood starter strip, leveled in true alignment. Nail metal channel over this

(Continued on page 220)

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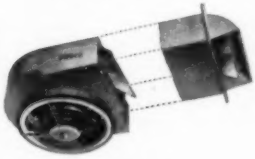

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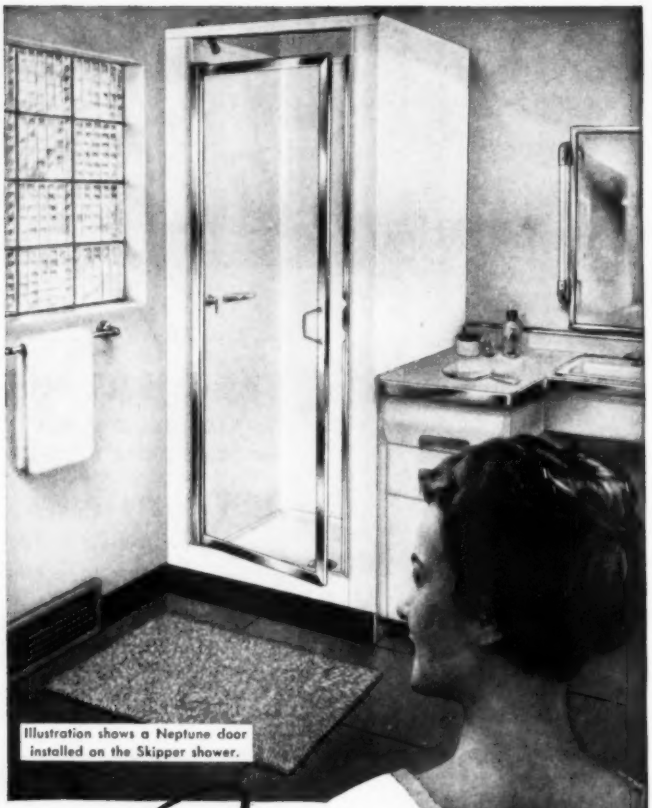

Illustration shows a Neptune door installed on the Skipper shower.

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(Continued from page 218)

strip to receive first course of siding shingles. This system can be used with either 16 or 24-inch o.c. stud spacing.

(2) Insert siding shingles into channel, and place leg of another channel over top edge of siding, repeating this procedure for each succeeding course. Channels are secured to wall by new Shadow-Lock hook-head nails, which are held over top edge of channel and driven through the sheathing into the studs. Nails do not show in finished job.

(3) To finish the corners, apply Shadow-Lock corner angles between

ALUMINUM CHANNELS give deep horizontal shadow lines to asbestos cement siding. Nails used to anchor channels do not show in finished job

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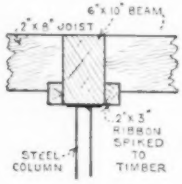
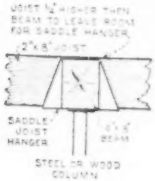
How We Would Do It

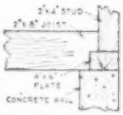
There are a number of building practices which come to our attention that may not necessarily be poor construction. But there are alternate methods of doing some of these jobs which will prove to be easier, more economical and can even result in more strength. Below the editors present a few examples:



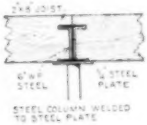
To gain headroom in a basement, a builder rested his floor joists on 2x3-inch ribbons spiked to the timber. The joists were toe-nailed to the timber and notched around the ribbon. A steel column supported the beam. None of the flange projected to support the ribbon. The headroom construction would have been stronger if saddle joist hangers had been used. Joist hangers would have been cheaper than the extra lumber and time involved. A 6x8 inch beam can be substituted for the more expensive larger one.

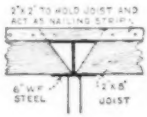


A seating problem will present itself in this method where a 4x6-inch plate was used in connection with balloon framing. The joist was cut around the large plate. It is questionable if it will seat on the foundation or the plate. If, on the plate it will probably split because of fitting around the large timber. Standard or western framing would have been stronger as the whole joist rests on the plate. Also, fire stops are difficult to build in balloon framing.



To gain basement headroom a builder used a 6-inch, wide flange, steel beam and cut the joists around the beam to secure a nailing surface. This job also incorporated a steel plate under the joist and beam. The plate was welded to the steel column. Time and money could be saved on this job by using a wire flange beam and angle cutting the joist to fit into the flange. A nailing surface can be obtained by spiking a 2x2-inch piece, 18 or 24 inches long to the joist. Twisting can be prevented in both cases by bridging. Joist hangers could also be used with the steel beam. But the fitting method is the cheapest.





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Redwood in the News

When awards for exceptional building projects were made in southern California recently, a high percentage of the winners were those containing redwood, both inside and out, like the apartment dwelling pictured at left.

Residences, apartments, and a church were among the honored. The Pasadena and Southern California chapters of the American Institute of Architects made the awards to members for projects completed during the past five years.

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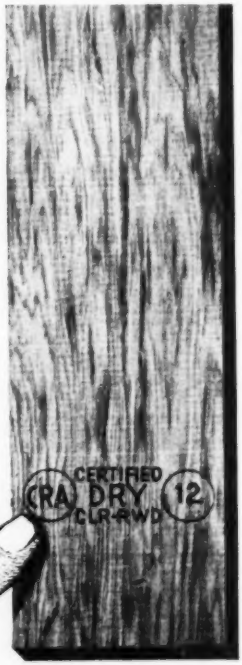
It tells your customers they're getting Redwood that's uniformly graded, precisely milled, and carefully dried and seasoned.

Why take chances? Always feature CRA grade-marked, trade-marked, Certified Dry Redwood—the Redwood you can be *sure* of—the Redwood processed by the member firms of the...

CALIFORNIA REDWOOD ASSOCIATION



HOLMES EUREKA LUMBER CO.
NORTHERN REDWOOD LUMBER CO.
THE PACIFIC LUMBER CO.
ROCKPORT REDWOOD CO.
SIMPSON LOGGING CO.
UNION LUMBER CO.
WILLITS REDWOOD PRODUCTS CO.
ARCATA REDWOOD CO.
COASTAL PLYWOOD & TIMBER CO.
HAMMOND LUMBER CO.

Luther Atkinson, Kawneer Vice President, Dies After Long Illness

Luther H. Atkinson, vice president and director of the Kawneer Co. died January 3 in Chicago at the age of 60. He had been ill about two years.

Mr. Atkinson, who made his home in Niles, Mich., was born in Barclay, Texas, attended elementary and high school in Temple, Texas, and business college in Dallas. He served as a Field Artillery officer in World War I.

Luther H. Atkinson

Widely known in the building materials industry, Mr. Atkinson was recognized as a leading sales executive. His first position after leaving the Army was with the Red Top Steel Post Co. After that he held the positions of general sales manager of Wood Conversion Co., general sales manager of U.S. Gypsum Co., vice president in charge of marketing for Weyerhaeuser Sales Co., and during World War II was vice president in charge of sales at Elastic Stop Nut Corp.

He joined the Kawneer organization on September 4, 1945, serving from that date as a vice president and a member of the board of directors.

Services of Lighting Told in New Booklet

A 24-page booklet called "Lighting and the Nation's Welfare" has been published as a public service by the National Information Committee on Lighting. The booklet is a summarized report of research on lighting in American industrial production, public safety, research and education, and government.

Requests for the booklet should be addressed to the National Information Committee on Lighting, 1410 Terminal Tower, Cleveland, Ohio. Copies are 15 cents each in quantities of 100; 10 cents each in lots of 500 or more. Single copies are 25 cents each.

For all who use sawhorses

AT WORK OR AT HOME

Jiffy

SAWHORSE BRACKETS

NO NAILS
NO SCREWS
NO BOLTS

Set Up or Knocked Down in a Jiffy

Use 2 x 4's for legs, and a 2 x 4, 2 x 6, 2 x 8, 2 x 10, or 2 x 12 for the crossbar.

Easy to Move from job to job

Easy to Store between jobs

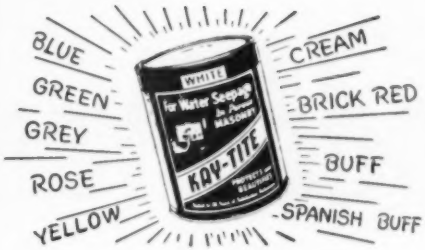
Now you can have a rugged, sturdy sawhorse whenever and wherever you need it. No longer is it necessary to carry a big, cumbersome sawhorse from place to place.

A set of Jiffy Brackets and five pieces of 2 x 4 make a sawhorse any time anywhere. Put together or knocked down in a jiffy.

For sale in hardware and building supply stores everywhere. Order direct if your dealer cannot supply you.

GRAND HAVEN STAMPED PRODUCTS CO., Grand Haven, Mich.

STAY TIGHT WITH KAY-TITE



FOR

CINDER BLOCK WALLS CEMENT BLOCK WALLS
STUCCO SURFACES
PUMP AND BOILER PITS
FIELD AND QUARRY STONE
CONCRETE MASONRY RETAINING WALLS
ROUGH MASONRY UNGLAZED TILE
SWIMMING POOLS CISTERNS SILOS
ELEVATOR PITS CELLARS RESERVOIRS
COPINGS BRICK WALLS
BRICK PIERS FISH PONDS

KAY-TITE CAN BE USED ABOVE OR BELOW GRADE, INSIDE OR OUTSIDE

Available in 50 lb. drums
White and 9 colors.

Member National Association of Home Builders

SEND THIS COUPON FOR INFORMATION FOR BUILDERS

KAYTITE COMPANY BOX 550 WEST ORANGE, N. J.
PLEASE SEND BUILDERS INFORMATION:

NAME OF COMPANY .....
STREET .....
CITY ..... STATE .....
ATTENTION OF .....

KAY-TITE COMPANY
WEST ORANGE • NEW JERSEY
ELEVEN FAR WESTERN STATES CONTACT KAY-TITE COMPANY
1717 WESTLAKE AVENUE, NORTH, SEATTLE 9, WASHINGTON
More than 20 years of satisfactory performance

Wharton Clay, Pioneer Association Executive, Dies in New York

Wharton Clay, 70, secretary-treasurer of the Perlite Institute, died of a heart ailment January 2 at his home in New York City. He had been ill for six weeks.

Mr. Clay was a pioneer in leading trade association activities in the building industry. He was secretary-

Wharton Clay

treasurer of the National Mineral Wool Association and a commissioner of the Metal Lath Manufacturers Association.

During World War II, Mr. Clay was a member of the Fuel Conservation Board. Last fall he accepted for the Perlite Institute the American Trade Association's Class 1-A grand award. Secretary of Commerce Charles Sawyer made the award and praised Mr. Clay's research contributions to industry through the institute.

Mr. Clay was a member of several construction industry professional groups, including the Architectural League of New York and the American Standards Association.

Asphalt Roofing Sales Continue Climb in '51

Manufacturers shipped 86,704,100 squares of asphalt roofing in 1950, an all-time high; and shipments in the first eight months of 1951 were ahead of the first eight months of 1950 by 1,400,000 squares, according to the Department of Commerce.

In releasing the figures, Jack Bryant, managing director of the Asphalt Roofing Industry Bureau, said that dealers as well as manufacturers played an important part in making the production possible. Heavy inventory buying during the winter of 1949-50 and 1950-51 was a key factor.

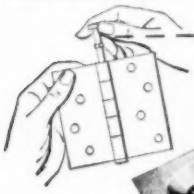
Another bumper year is in prospect, according to Bryant.

This Hinge is made with YOU in mind

✓ **Check these features and you'll understand what we mean**

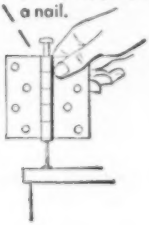
Patented non-rising pin...

doesn't ride up. It snaps into place and stays there.



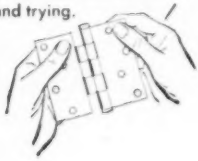
Hole in lower tip

makes it easy to remove the pin by tapping with a nail.



Accurately-made interchangeable hinge leaves

speed door hanging. Hinges always fit in mortises, no cutting and trying.



Rounded corners

(available if you want them) permit you to cut mortises with Hinge Mortiser and Template . . . to hang doors six times as fast.

The Stanley Works, New Britain, Conn.

STANLEY

Reg. U. S. Pat. Off.

HARDWARE · TOOLS · ELECTRIC TOOLS
STEEL STRAPPING · STEEL

At your dealer's ask for the Stanley Hinges with the hole in the tip. You'll find them in the famous green boxes with the yellow labels.

THE MOST FAMOUS DOORS IN THE WORLD SWING ON STANLEY HINGES

Builder Skogman says:

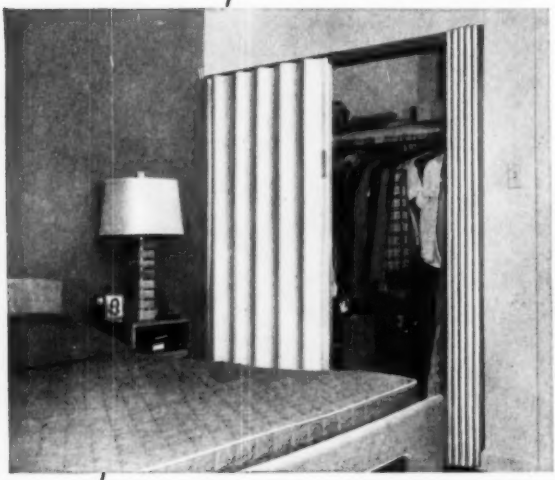
"MODERNFOLD"

doors give us extra space... at no extra cost

"Everyone who went through our apartments was impressed with the beauty of 'Modernfold' doors and the space they save," reports LeRoy E. Skogman, builder of Oakland Court and Oakland Gardens, 199-unit apartment projects in Cedar Rapids, Ia.

As shown below, Mr. Skogman was able to put beds close to closets... still have room for a handy night table...because "Modernfold" doors *fold* back on themselves rather than *swing* out into the room.

As a builder, you'll like the way these



steel-framed, vinyl-covered doors save both labor and materials. They go up in a hurry—*complete.* No fitting, painting, hardware or cornices needed.

For full details about "Modernfold" —*the folding door that gives you more* —mail the coupon.

In step with today's trend toward combination rooms, many builders use large "Modernfold" doors as movable walls. This picture shows a "Modernfold" door used to separate kitchen work area from dining space.

Sold and Serviced Nationally
NEW CASTLE PRODUCTS
NEW CASTLE, INDIANA
In Canada: Modernfold Doors, 1315 Greene Avenue, Montreal

the doors that fold like an accordion
modernfold DOORS
by NEW CASTLE

COPYRIGHTED NEW CASTLE PRODUCTS 1952

New Castle Products
P.O. Box 833
New Castle, Indiana

Gentlemen:
Please send me full details on "Modernfold" doors.

Name .....
Address .....
City ..... *County* ..... *State* .....

INDUSTRY BRIEFS

The appointment of **C. S. Stackpole** as vice president in charge of the Williams Oil-O-Matic Division, Eureka Williams Corp., has been announced by H. W. Burritt, corporation president. Stackpole fills the vacancy left by L. A. Casler, executive vice president, who is now in charge of defense work and over-all production.

Stackpole

* * * * *

J. P. Foley, sales manager of the Special Products Branch, **Weyerhaeuser Timber Co.,** has transferred his headquarters to the Weyerhaeuser Sales Co. offices in Chicago. Foley had previously been located at Longview, Wash.

* * * * *

James H. W. Conklin has been appointed general sales manager of the Philadelphia Division, **Yale & Towne Mfg. Co.,** Elmer F. Twyman, vice president, has reported. Conklin, formerly with Pangborn Corp., Hagerstown, Md., succeeds James P. Kinney who is taking over Yale & Towne's distributorship in Los Angeles and Southern California.

Conklin

* * * * *

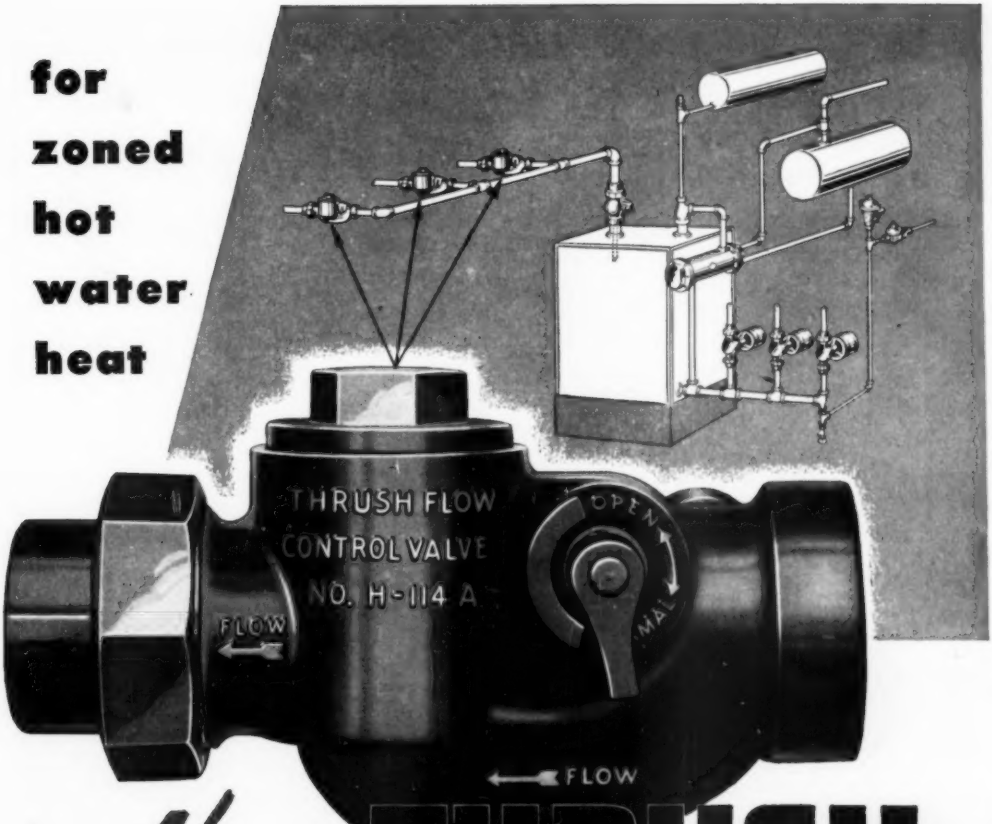
Timken Silent Automatic Division, Jackson, Mich., announces two changes in its sales organization: **Felix Huber** has been appointed regional manager for Iowa, Illinois, Missouri, Nebraska and Kansas, succeeding **W. J. Chappell,** who now serves as regional manager for Michigan, Ohio, Indiana, Tennessee, Kentucky and West Virginia. Huber joined Timken in 1949 as a district sales manager; Chappell has been with the firm since 1932, serving in advertising and sales positions.

* * * * *

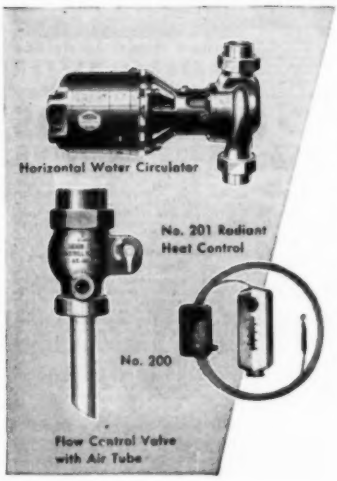
Appointment of **Joseph L. Armstrong** as manager of the air conditioning sales section of the Crosley Division of **Avco Mfg. Corp.** has been announced by W. A. Blees, Avco vice president and Crosley general sales manager. Armstrong was recently vice president for sales of Crosley Motors and prior to that served as field sales manager for Bendix Home Appliances.

Armstrong

for zoned hot water heat



the *New* THRUSH



HORIZONTAL FLOW CONTROL VALVE

HERE'S THE valve you need for zoning hot water heat. Just the thing for low basements. It saves pipe, simplifies installation and gives more head room . . . especially important on long runs. As the illustration shows, this valve feeds straight out from the main and saves several inches of head room over angle type valves. There's a Thrush Flow Control Valve for every need . . . the line is complete with angle and vertical valves, with or without air tube, and the new horizontal space-saving valve announced here. All have the same time-tested operating principle and working parts. For easy zoning of hot water heat and assured customer satisfaction, install the complete forced circulating Thrush Flow Control System. See our catalog in Sweet's or write Department G-2.

H. A. THRUSH AND COMPANY

PERU, INDIANA

Why it pays builders to be Gate City Awning-Window-Wise

Popular ...because years ahead with climate control ventilation advantages.

Economical to install

...because each unit is delivered to the job completely assembled, including glazing and hardware.

Dependable

long lasting performance because deep toxic-treated for resistance to rot, fungi and termites. Hardware mechanism is rust resistant and simple to operate.

Dual Control

no warp, torque or twist because opening and closing force is distributed evenly to both sides of the sash. No extra gadgets to bother with for tight closure.

Weathertight

the completely factory weather-stripped window bears the A.W.W.I. Seal of Approval.

WOOD AWNING WINDOWS
PIONEERED BY
Gate City

MEMBER OF THE PRODUCER'S COUNCIL, INC.
Refer to Sweet's Builders' File 4-d GA

GATE CITY SASH & DOOR CO. AB--2
"Wood Window Craftsmen Since 1910"
P. O. Box 901, Fort Lauderdale, Florida
Gentlemen: Send complete information and literature on GATE CITY Awning Windows.

NAME _____
ADDRESS _____
CITY _____ STATE _____

INDUSTRY BRIEFS

Brock

Albert J. Brock has been named district manager of the newly-formed Bridgeport District of **General Electric Supply Corp.** The district includes Stamford, Bridgeport, New Haven, New London and Waterbury, Conn. Brock came to the corporation from General Electric Co., where he was national merchandise manager for major appliances. Prior to the recent war, in which he served three years with the Army Air Force, Brock was a distributor in St. Louis.

* * * * *

The Ready Hung Door Corp. Fort Worth, Texas, has granted a license to the **Haskelite Mfg. Corp.,** Grand Rapids, Mich., for the manufacture of Ready Hung Doors. Negotiations were recently completed in Grand Rapids by Edward L. Guerrant, president of the Licensing firm, and George H. Redlin, Haskelite president.

* * * * *

M. D. Durham, Youngstown Kitchens field sales executive, has been appointed manager of the firm's newly organized western sales division with headquarters at San Francisco, sales manager D. F. Rucks Jr. reports. **W. L. Barnett,** regional manager in Texas, becomes southwest zone manager at New Orleans. **James C. King,** also a regional manager, was named zone manager at Charlotte, N. C.

* * * * *

Appointment of **George B. Motheral** as manager of glass advertising and sales promotion for **Pittsburgh Plate Glass Co.** has been announced by Guy Berghoff, director of public relations and advertising for the firm. Motheral, a graduate of Lehigh University and a World War II Navy officer, joined the firm in 1940.

* * * * *

Five executive promotions have been reported by **Universal Atlas Cement Co.: George H. Reiter,** vice president and general sales manager, to the new office of executive vice president; **Fred T. Wiggins,** vice president and assistant general sales manager to vice president and general sales manager; **Charles B. Baker,** assistant to president and secretary, to vice president and general attorney; **Donald C. Leo,** assistant secretary, to secretary; and **Edward D. Depew,** attorney, to assistant secretary. All are in New York City.

CONTRACTORS—save money!

Mix plaster and mortar in a MULLER 3 FOOT MIXER

• An investment that will give you better plaster and mortar at far lower costs than old hand methods. Ideal for both inside and outside use. Holds full bag batch of most mixtures.

PRICE $312 (with electric motor)
$330 (with air-cooled engine)
FOB Metuchen, N.J.

Also available in 6, 9 and 12 cubic foot sizes

Write for name of nearest distributor.

MULLER MACHINERY COMPANY, Inc.
Metuchen 4, N.J. Cable Address MULMIX

CUT BUILDING COSTS!

Patented flanged braces assure extra rigidity and strength for superior load carrying, durability.

Bridge Wood Joists the FASTER...BETTER Money-Saving Way

WITH NEW CHAN-L-CROS Metal CROSS BRIDGING

Easy to Install

Chan-L-Cros is an advanced method of bridging wood joists that provides greater floor strength and cuts building costs. It reaches you ready for quick, easy installation . . . speeds construction because it eliminates sawing and fitting of wood. This greatly reduces time and costs . . . increases the contractors profit!

Other Advantages That Make Chan-L-Cros Better

It distributes a concentrated load to adjacent joists to prevent deflection of beams by the practical application of the principle of tension . . . it is flexible enough so that joists off required centers can be fastened just as securely as those precisely placed . . . provision for nailing meets requirements of all building codes . . . does not interfere with laying of subflooring . . . cannot separate from joists when under load or as lumber shrinks.

Chan-L-Cros is available in sizes for 8, 10, and 12 inch joists . . . suitably finished to resist rust. It is also recommended for construction of arched ceilings.

Write for Complete Data!

JUNIOR-PRO PRODUCTS CO.
3206 Morganford Rd., St. Louis 16, Mo.

In 30 years, not one cent for maintenance of this roof!

. . . a positive answer to the question: "How long will a roof of "Century" Asbestos-Cement Shingles last?"

Residence in Jackson Heights, L. I., N.Y., roofed with "Century" Asbestos-Cement Shingles in 1920.

Read what this home owner says (name and address upon request):

• ". . . In 1920, I decided to use 'Century' Asbestos-Cement Shingles on the roof of the new residence being built for me. While they were a relatively new product at that time, I was impressed by their fireproof qualities and that they would not require painting to preserve them.

• "It is a pleasure to state that from 1920 up to the present I have not spent one cent for maintenance of the roof, and at no time has there been any evidence of a leak. The 'Century' Shingles appear to be as good today as when first put on."

This is outstanding testimony to the stone-like durability and long-term economy of "Century" Asbestos-Cement Shingles. Tell your customers about this house . . . about this "Century" Shingle roof. Facts like these can help you increase your sales and build your profits with "Century" Asbestos-Cement Roofing Shingles.

K&M Cast in asbestos ®

Sales making facts about "Century" Asbestos Roofing Shingles

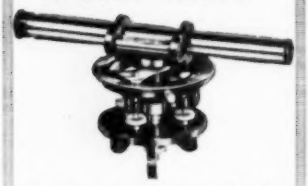
- Variety of attractive colors: Spanish Red, Surf Green, Gray Duoface, and Black.
- Choice of three styles to suit individual tastes.
- Resist fire and weather, can't be damaged by rodents or termites, will not rust or rot.
- Moderately priced; permanently economical—don't even need protective painting to preserve their beauty.
- Designed for quick, easy, and money-saving application.
- Nationally advertised in leading publications.

A top-quality product . . . backed by strong advertising support . . . to increase your sales . . . build your profits. Write us for further details and the name of our local distributor.

KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA

Original Manufacturers of Asbestos-Cement Shingles in this Country

You can get ideal light construction levels made by David White



This low-priced, reliable David White Improved Light Construction Level No. 8020 is simple and easy to use. Telescope 10" long, 10 power. Graduated spirit level, 4½" dia. circle graduated in degrees in quadrants. Has leveling screws and clamp screws. Complete with instruction book, carrying case, plumb bob, hinged leg tripod, rod and target. List price: $55.00*.

The David White Improved Light Construction Level Transit No. 8022 is a low-priced, simple, complete combination instrument. Levels and plumbs from same set-up. Has same features of instruments costing $100.00 or more. 2½" graduated spirit level. Vertical arc 2½" graduated. Horizontal circle — 4½" graduated in degrees in quadrants. Base has 4 leveling screws and shifting center. Clamp and tangent screws for vertical arc and horizontal circle. Complete with instruction book, carrying case, hinged tripod, plumb bob and rod with target. List Price: $75.00*.

How many times have you wished for easy-to-use, low-cost levels and transits? Instruments ideally suited to light or rough construction work — basement excavating, landscape grading, trenching, tiling, concrete work, laying out building lots, etc. Here's your answer. These instruments are fully guaranteed. Small contractors have successfully used them for years. Big contractors often supply their individual crews for on-the-job service. See them at your nearest David White dealer or write direct for literature. DAVID WHITE COMPANY, 311 W. Court Street, Milwaukee 12, Wis.

DAVID WHITE COMPANY

We offer complete, prompt repair service on all makes of instruments—levels, transits, theodolites, etc.

*Prices subject to change without notice.

INDUSTRY BRIEFS

Frank D. Davis has been appointed public relations manager for **National Gypsum Co.**, taking the post vacated by David A. White, Jr., now on active duty with the Air Force. Davis, a graduate of Dartmouth College, was formerly public relations director for Davis and Elkins College, Elkins, W. Va.

* * * * *

The opening in Nashville of new vermiculite processing plant which will serve Western Kentucky and Tennessee has been announced by the **Zonolite Co.** The plant is the 35th of its kind owned or licensed by Zonolite in the United States and Canada, company officials said.

* * * * *

Georgia-Pacific Plywood Co. has completed a warehouse improvement and expansion program at Port Newark, N. J., tripling the warehouse capacity, James L. Buckley, vice president of the firm's eastern division, has reported. Buckley also announced opening of the company's new all-plywood office building at Port Newark.

* * * * *

A new plant, built expressly to house its recently established Appliance Controls Division, has been completed by **General Controls Co.** at Glendale, Calif., W. A. Ray, president, has announced. The new facility will provide 15,000 square feet of working space.

* * * * *

A Los Angeles sales office for Southern California has been opened by **Alsynite Company of America**, plastic building material manufacturer. Glenn D. Stecker has been named manager of the office, according to Louis L. Potomac, president of the San Diego firm.

* * * * *

More than 15,000 persons, including employees and their families, the general public, civic officials and stockholders, toured the Chase Metal Works plant during **Chase Brass and Copper Co.'s** recent open house in Waterbury, Conn., sponsored by the firm as part of its 75th anniversary observance.

* * * * *

Direct mail advertising material, produced during the past year by the **Celotex Corp.**, was judged best in the building materials industry in the Direct Mail Advertising Association's 23rd annual competition. Award winners were announced during the association's annual convention, held recently in Milwaukee. This is the third consecutive year Celotex has won the DMAA award.

annular-threaded linoleum underlay drive screws

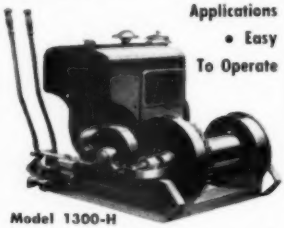
To make your linoleum underlays hold tightly and lie flat permanently, secure them with Hassall annular-threaded linoleum underlay drive screws. They are cement-coated for maximum gripping power. Heads are flat countersunk type. Size: 1¼" x #3 gauge. State quantity when writing for prices to:

JOHN HASSALL, INC.
152 Clay Street
Brooklyn 22, N. Y.
Established 1850

Hassall

SMOOTH
KING Hydraulic Control HOISTS

- Efficient & Economical
- Many Applications
- Easy To Operate

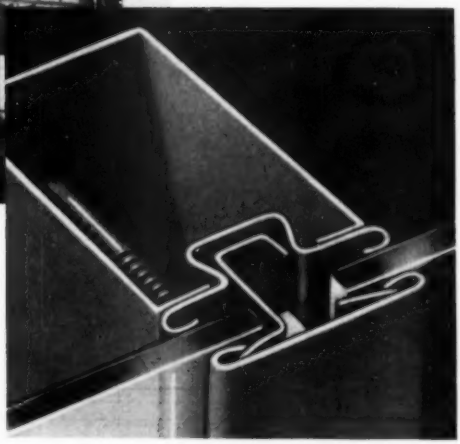


Model 1300-H

Operates material elevators smoothly. External contracting brake band. Anti-friction ball and roller bearings. Double roller bearing pillow blocks. Oversize hydraulic parts. Gas, diesel or electric motor, or use your own. Model 1300-H, 13 h.p. Wisconsin engine, lifts 3000 lbs. 100 f.p.m. 2500-H 25 h.p. lifts 6000 lbs. 100 f.p.m.

KING MANUFACTURING CORPORATION
3158 W. Chicago Ave., Chicago 22.

The Blue Cross Building of Hospital Service of California Oakland, California Contractors: Swinerton & Walberg



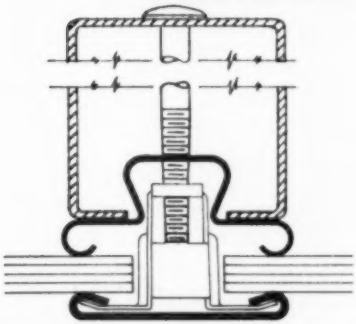
NEW KAWNEER BARS

Engineered for Fast and Speedy Installation of Large Lights of Glass

Builders today are faced with new installation problems as a result of the increased use of large lights of glass.

To help builders solve these problems, Kawneer has developed an entire new line of sturdy, easy-to-install, horizontal and vertical bars, stiffeners, and anchors.

Write for details and information. The Kawneer Company, Dept. AB-110, 1105 N. Front St., Niles, Mich., or 930 Dwight Way, Berkeley, Calif.



THE Kawneer COMPANY

ARCHITECTURAL METAL PRODUCTS

STORE FRONT METALS • ENTRANCES • TRIM • ALUMINUM FACING MATERIALS • ALUMINUM ROLL-TYPE AWNINGS • AWNING BOXES AND HOODS • ALL-ALUMINUM FLUSH DOORS • SHOWCASE DOORS

with

COPROX

the NEW copperized hard cement coating

LIFE *told about it in the July 16th issue*

▶ **PROTECTS MASONRY AGAINST WATER SEEPAGE, DAMPNESS AND EROSION**

It's easy to get rid of wet walls and cellars with COPROX. Many leading builders, architects and engineers swear by it.

COPROX is easy to apply. Lasts for years. Costs approximately $35 for materials in the average house. Supplied in decorative buff, grey, green and rose as well as white. Builders report COPROX costs them approximately 6¢ per square foot for labor and material to apply . . . cheaper than painting, as a matter of fact.

▶ **CONVERTS DAMP MUSTY BASEMENTS INTO BEAUTIFUL DEN OR PLAYROOM**

▶ **STOCKED BY HARDWARE, Paint or Building Supply Dealers.**

GET MORE INFORMATION ABOUT COPROX TODAY

COPROX, INC. AB3
1270 Avenue of Americas, New York 20, N. Y.

Tell me how COPROX can fix up my wet cellar fast and at little cost.

NAME.....

STREET ADDRESS.....

CITY.....ZONE.....STATE.....

Only Screen Exposed In This Television Wall Installation

A new method of concealing all but the screen of television sets by placing the set chassis in a wall recess has been developed by a Milwaukee building designer and contractor, Richard Pritchard, who is head of Big Screen Television Corp.

In Pritchard's method, which is already in practical operation in more than 50 homes, living space is saved, and the screen or tube face of the set, when not in use, is covered by a framed picture on the wall to match the room's decor.

Another feature of the wall installation is a completely automatic device which simultaneously slides the picture down into the wall, exposing the viewing screen, and turns the set on. When desired, an electric switch reverses the operation. An installation which permits manual movement of the picture can also be used.

TV SCREEN is moved out of sight as framed wall picture slides back into place. Operating the automatic switch is Richard Pritchard, who developed the recessed installation

No control knobs need be installed in the masking of the picture if the set is remote-controlled and features projection-type reception. In a direct type TV installation, the control knobs are usually located on the masking around the tube face but also can be placed elsewhere if a remote control unit is used.

Other advantages of the wall installation, cited by Pritchard: "picture level" viewing, following the normal line of vision; and possible savings by set purchasers of the difference between the cost of a console and a table model. The chassis may also be used without cabinet, since it is concealed.

The simplest way to install the viewing system is in a wall backed by a closet where the chassis can be mounted. However, Pritchard said, the unit can be mounted on any inside wall by enclosing the chassis on the opposite side with some type of attractive wall case.

REMODEL EASIER . . . FASTER!
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See how you save with
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TRUCKS

first in demand in value in sales

Fact No. 1

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Chevrolet trucks list for less than any other trucks built to handle the same payloads. Here is a real, money-in-the-bank savings on purchase price. And you'll find the Chevrolet brings you ruggedness, stamina and great truck features not found in many other trucks.

Fact No. 2

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Chevrolet trucks give you Valve-in-Head economy that saves gas, four-way engine lubrication that reduces wear and saves oil, and tough, rugged construction for longer truck life. Like truck users everywhere, you'll find Chevrolet trucks cost less to own and maintain.

Fact No. 3

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Chevrolet trucks are *factory-matched* to meet your requirements. You get the right truck for the job . . . never "too much" or "too little" truck. Frame, axles, springs, body, brakes, and power form a *balanced team.*

Fact No. 4

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Records show that Chevrolet trucks traditionally bring more money at re-sale or trade-in than many other makes. Chevrolet's market value stays up because the value stays *in.* More reason to see your Chevrolet dealer for your best truck buy!

ADVANCE-DESIGN CHEVROLET TRUCK FEATURES

TWO GREAT VALVE-IN-HEAD ENGINES—the 105-h.p. Loadmaster or the 92-h.p. Thriftmaster—to give you greater power per gallon, lower cost per load • POWER-JET CARBURETOR—for smooth, quick acceleration response • DIAPHRAGM SPRING CLUTCH—for easy-action engagement • SYNCHRO-MESH TRANSMISSION—for fast, smooth shifting • HYPOID REAR AXLE—for dependability and long life • TORQUE-ACTION BRAKES—on light-duty models • PROVED DEPENDABLE DOUBLE-ARTICULATED BRAKES—on medium-duty models • TWIN-ACTION REAR BRAKES—on heavy-duty models • DUAL-SHOE PARKING BRAKE—for greater holding ability on heavy-duty models • CAB SEAT—with double-deck springs for complete riding comfort • VENTI-PANES—for improved cab ventilation • WIDE-BASE WHEELS—for increased tire mileage • BALL-TYPE STEERING—for easier handling • UNIT-DESIGNED BODIES—for greater load protection • ADVANCE-DESIGN STYLING—for increased comfort and modern appearance.

CHEVROLET DIVISION OF GENERAL MOTORS, DETROIT 2, MICHIGAN

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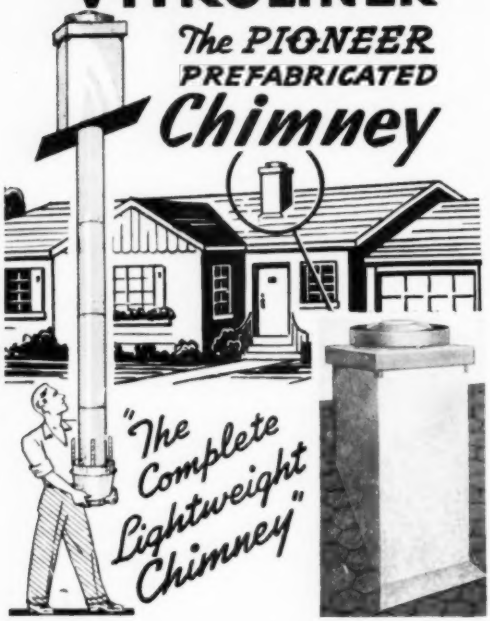

Vitroliner, the pioneer in the field, is the ONLY modern low-cost quality chimney that is TAILOR-MADE to fit the exact roof pitch of the individual home or building.

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STONE VENEER ENTRANCE and screened porch are features

A $20,000 Indianapolis House

Builder:
A. H. M. Graves, Indianapolis, Ind.
Architect:
Oscar J. Pool, A. I. A., Indianapolis, Ind.

A stone entrance and a porch conveniently located for outdoor summer dining are the principal features of this ranch style house. Containing 10,130 square feet of living space, the long dimension of the house is 50 feet.

Three bedrooms with ample closet space open on a bath hall. The bath has built-in cabinet and a clay tile floor. The home has plastered walls and oak flooring. The entry has a closet to the right; separating it from the rest of the room is a corrugated glass partition.

The exterior is standard frame construction with an asphalt shingle roof. Storm and screen doors are used to close the porch from the weather.

A full basement, two car garage, black top drive, 75 x 210 foot lot, and landscaping are included in the $20,000 price.

PLAN of three bedroom 10,130 square foot home

BRANDED PRODUCTS USED

Armstrong linoleum
Carey asphalt shingles
Crane hot water heater
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Formica counter tops
Kitchen-aire exhaust fans
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How long will it take?

How much will it cost?

Here's Your Right Answer to Both Questions!

Now, there's a *business-building* answer to the two main questions people ask about remodeling. That answer is the Nu-Wood and Balsam-Wool System. Here's how it works:

1. How long will it take?

Nu-Wood insulating Tile, Plank and Lok-Panels go up quickly to build or remodel rooms in attics, basements and other space. Modest in cost, Nu-Wood is factory-decorated—another big time-saver for the home-owner. Nu-Wood takes the muss and fuss out of remodeling. It provides lasting value for the home-owner—adds extra insulation and quiets noise.

2. How much will it cost?

The Nu-Wood and Balsam-Wool System has a wonderful answer for that one! Balsam-Wool Sealed Insulation, installed in the uninsulated attic of a home, will save enough in fuel to pay for itself and the Nu-Wood remodeling, too! What's more, Balsam-Wool attic insulation is sold under a money-back guarantee of complete satisfaction.

Hundreds of builders throughout the country are finding the Nu-Wood and Balsam-Wool System the key to greater remodeling sales. Want to know more? Then mail the coupon!

Wood Conversion Company
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St. Paul 1, Minnesota

Please send me complete information about the Nu-Wood and Balsam-Wool System.

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VMP STEEL FRAMES GIVE YOU THREE BIG TIME AND LABOR SAVINGS

1. Pre-welded into complete one-piece assembly, VMP *steel* frames require no on-the-site assembly.
2. Mortises in doors and frames for locksets pre-cut at factory — no on-the-site mortising.
3. VMP flush metal doors exactly fit frames for perfect operation — no on-the-site cutting or fitting.

Why even consider using wood or any other door and frame when you get these three big installation cost cuts with VMP metal doors and frames. How much more satisfied you and your customers will be! For VMP steel frames never warp, sag, or crack. Never change dimension. Give longest, most dependable service. No customer complaints. No costly call-backs to repair doors or frames. And they're fireproof, too!

Order VMP metal doors and frames for plaster wall, masonry wall and dry wall construction, and cut your door and frame installation costs — way down!

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VIRGINIA METAL PRODUCTS CORPORATION
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Living Room "Face Lifting" For Less than $100

This attractive living room "face lifting" was done at a total expense of only $93.50—an outstanding example of what can be done at low cost with a good remodeling idea.

Mrs. Gladys Bonsall of Los Angeles was determined to make the greatest possible improvement in appearance without getting involved in costly structural changes. Her solution—revamping the one wall—resulted in a warm,

Before . . .

After . . .

modern effect for the whole room at a cost of $37.50 for lumber and $50 for installation. Finishing materials, which Mrs. Bonsall applied herself in about 10 hours, were $6.

The fireplace wall is ⅜-inch Philippine mahogany tongue and groove paneling, finished in warm, light red tones. The windows flanking the fireplace were sealed over on the inside with paneling, avoiding changes in the outside appearance of the house.

A recessed light is used for the shadow box above the fireplace; book shelves are pegged, with a strip of peg holes on each side for easy adjustment of the shelves.

Food Waste Disposer Production Up

A total of 197,493 food waste disposal units were made in the first six months of 1951 as compared with 105,573 in the first six months of 1950, according to the Plumbing and Heating Industries Bureau.

Of the 304,165 food waste disposers made in 1950, it is estimated that about 70 per cent were installed in new homes.

Let Wadsworth Show You How Your Favorite Plan Can Be Mass Produced, Too!

Our New, Practical Method Of Building Gives You The Speed And Economy Of Mass Production Without Loss Of Quality; Builders Of Wadsworth Homes Now Deliver More Homes And Make Most Efficient Use Of Labor

In city after city, builders who have an established reputation for quality are finding that the Wadsworth method of building is the one answer to the problem of building homes speedily without loss of quality. They report sensational success stories that you can match in your own community.

How The Wadsworth Method Works

Wadsworth Homes are built in a conventional manner, just as you would build them on the site. The difference is simply this: we do the work in our factory. Skilled craftsmen using precision methods, build Wadsworth Homes section by section. Only top quality materials are used. Jig assembly assures accuracy. And these sections are carefully inspected before they are shipped to you.

This Method Is Flexible

Your favorite plan can be mass produced for you in our factory. Our architects and designers will work with you to plan your house section by section. Then we will build it for you. While the house itself is being built in our factory, you complete the foundation. When you are ready, the house sections will be shipped to the site by truck.

40 Hour Rough-In

Your own crews do the work of erection. Floor joists are supplied cut to size and marked. Sub-flooring is cut to size. The wall sections are complete with plywood sheathing and doors and windows in place. Roof trusses are assembled and ready to hoist into place. The entire work of roughing in a standard 28 x 32-foot home can be done by a 5-man crew in one eight-hour day!

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When rough-in is complete, your finising crews can work inside. This means that you can make use of your labor force the year 'round and build more homes. No other method permits this!

Many Sales Advantages

Wadsworth Homes are quality homes. They are not "prefabs" in any sense of the word. Banks, building and loan associations and the F. H. A. accept them readily for financing. In addition, Wadsworth gives you the sales help of a consistent advertising and merchandising campaign.

Investigate Wadsworth NOW

If you are a builder with an established reputation for quality, we would like to show you how the Wadsworth method of building can be of real help to you. Write to us today, on your letterhead. We will make immediate arrangements for one of our factory representatives to contact you.

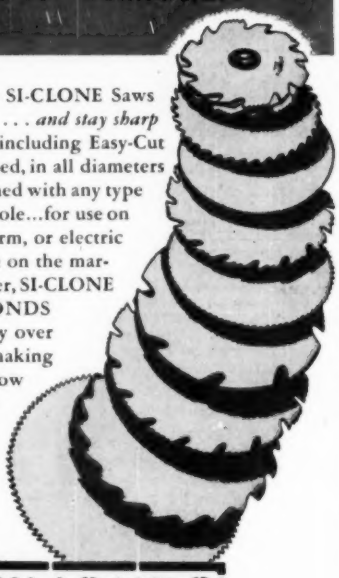
Wadsworth HOMES, Inc.

Fairfax Industrial District of Kansas City

Cut Like the Wind!

with SIMONDS SI-CLONE

...new low-priced, high-quality SAWS for Contractors



Yes, these new SI-CLONE Saws cut like the wind . . . *and stay sharp longer.* All types, including Easy-Cut and Carbide-Tipped, in all diameters up to 12". Furnished with any type or size of centre-hole...for use on any table radial-arm, or electric handsaw machine on the market. And remember, SI-CLONE Saws are SIMONDS quality, backed by over 75 years of sawmaking experience. So "blow in" to your hardware store today and ask for SIMONDS NEW SI-CLONE SAWS

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How an Old Building Was Given New Life

REMODELED PROFESSIONAL building in Staten Island, N.Y. and same structure as it appeared while it was unoccupied for many years. Below: first and second floor layouts

SECOND FLOOR PLAN FIRST FLOOR PLAN

After having been abandoned for several years, this frame shell in Staten Island, N.Y., was converted with a limited budget to an attractive professional building. Albert Melniker, A.I.A., Staten Island, planned and supervised the work. These alterations were made:

Foundation—Existing brick foundation pointed up; new brick piers placed under center girder.

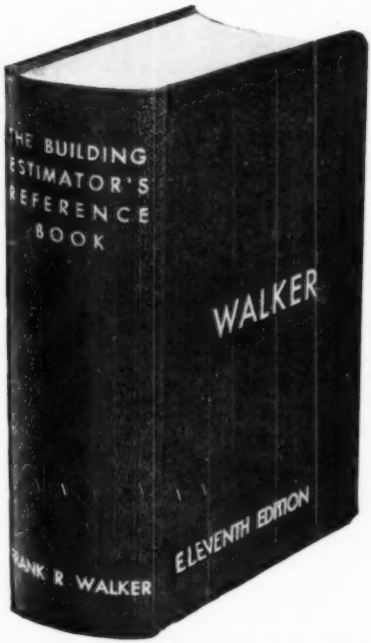
Exterior—Chimney rebuilt with new flue lining; new double hung wood windows installed; exterior walls surfaced with asbestos shingles; asphalt shingles applied on roof. Existing cornices were re-used where possible.

Interior—Original stairwell opened and new stair installed; walls and ceilings surfaced with 3/8-inch drywall; plywood laid over existing wood floors and finished with

(*Continued on page 242*)

New Eleventh Edition (1951)

The Building Estimator's Reference Book



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By Frank R. Walker

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A.B. 2-52

(*Continued from page 240*)

asphalt and linoleum; lavatories installed on first and second floors; all walls and ceiling insulated; complete new electrical system, with two meters; three coats of paint inside and outside. Because of the small unexcavated space in the cellar, the utility room was placed on first floor. A gas-fired forced air heating system was installed.

The rear yard was graded and covered with blue stone to serve as a parking area.

'Spread Defense Design Work to Smaller Firms, Non-Defense Areas': A. I. A.

Warning of future bottlenecks in the huge $5.8 billion military construction program pending in by Congress, the American Institute of Architects has proposed to the Department of Defense a plan to spread the design work for this program to architects in non-defense areas and to smaller architectural firms. Unless such a program were adopted and carried out, Glenn Stanton, Oregon architect and A.I.A. president predicted, major delays and waste would result from the failure to utilize professional resources to the full.

The architectural leader emphasized that the unprecedented military construction program, which is expected to commence almost immediately, is a diversified one of hospitals, schools, office buildings, laboratories, and many other building types in all parts of the United States, Alaska, Okinawa, and other overseas bases. It is designed to replace used-up temporary camps and facilities and put the 3.5 million man defense establishment into permanent buildings.

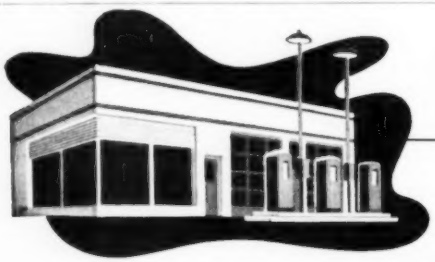
For this reason, Stanton said, the nation could ill afford to compromise with the quality of architectural design and service it received; nor could it resort to stock drawings and standardized plans (as it did for temporary wartime buildings) without enormous wastes in critical building materials and generally higher construction costs.

If government business-as-usual policies were continued in the stepped-up construction program, Stanton predicted, the normal structure of the architectural profession would be impaired as smaller firms collapsed and their personnel joined architects from non-defense areas in swelling the ranks of the relatively few larger firms in major defense centers who were favored with military contracts. He called for major changes before the construction program swung into high gear.

Permanent buildings and many other facilities for the Army, Navy and Air Force generally start on the drafting tables of architects and engineers in private practice. The military building program currently authorized for next year is about three times as large as the annual building programs since the war, and is expected to be followed by a series of large permanent building programs as temporary facilities now in use become obsolescent.

The program advanced by the architects' national professional society recommends the establishment of special design procurement offices. Large building programs would be broken down into building projects and allocated to architectural firms according to their type and size. Today they are often lumped together for administrative convenience and given to a single large firm.

The architects also called for the encouragement and recognition of newly formed pools of architects where they were qualified for military work. Existing policies of contract allotment which have favored professional firms in the immediate vicinity of the proposed projects, they said, should be modified to allow firms in non-defense areas to receive special consideration.



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Portland Cement

Use Trinity—the *whitest* white cement. A true portland cement that meets ASTM and Federal specifications. Trinity is first choice for architectural concrete units, terrazzo, stucco, paint and other uses. Regularly advertised to architects and other factors in the industry. Gives a pure white and true colors when pigments are added. Ask for Trinity White. General Portland Cement Co., 111 W. Monroe St., Chicago; Republic Bank Bldg., Dallas; 816 W. 5th St., Los Angeles; 305 Morgan St., Tampa; Volunteer Bldg., Chattanooga.

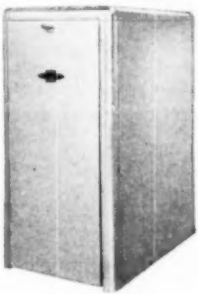
TRINITY WHITE is a *true* Portland Cement

as white as snow

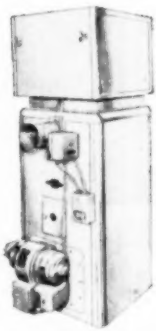
119 DELCO-HEAT units installed in new building project!

Section of the Oakridge development at Natick, Mass., built by Sumner D. Hersey, Inc., Realtors

Delco-Heat oil-fired steel boiler is perfectly suited for radiant heating systems—or conventional steam or hot water systems—in popular size homes. A tankless hot water coil is included as standard equipment. The location of the burner, gauges and controls on the front of the unit makes it ideal for installation in restricted areas or utility rooms. Available in round or cabinet-type jacket. Net rating, 300′ of steam or 480′ of hot water radiation.



Delco-Heat Reverse Flow Conditionair—a vertical type, oil-fired forced warm air furnace, specially designed for "perimeter" and "radial" heating systems. This is the ideal unit for low-cost warm air installations in homes without basements, where space is limited. Capacity: 75,000 Btu per hour output. Other models to 200,000 Btu per hour output.



"When planning the Oakridge development here in Natick, Massachusetts, we wanted the best heating system obtainable," writes Sumner D. Hersey, President of Sumner D. Hersey, Inc., Realtors. "After carefully considering several makes, we decided on General Motors Delco-Heat, and had 119 Delco-Heat Model SS Steam Boilers installed. The buyers of our homes are all more than satisfied with their Delco-Heat heating systems—and with the excellent service that has been given by Coan Brothers, Natick, Delco-Heat Distributor, who made the Oakridge installation." Francis Coan, at left, and Joseph Coan, at right, are pictured above with Mr. Hersey.

Mr. Hersey's 25 years of building experience has proved to him that Delco-Heat adds prestige and sales appeal to the new homes he builds. In Delco-Heat he gets top quality heating equipment at costs well within his budget for each house. And he knows, whether building 2, 20 or 200 homes, that General Motors manufacturing skill and engineering experience insure his buyers years of trouble-free operation.

Get all the facts about Delco-Heat units now. Learn about their complete flexibility, which helps solve many building problems. And remember—there is a gas or oil-fired Delco-Heat unit for any size house—any type heating system.

CLIP AND MAIL TODAY!

DELCO APPLIANCE DIVISION, Dept. AB
General Motors Corp., Rochester 1, N. Y.

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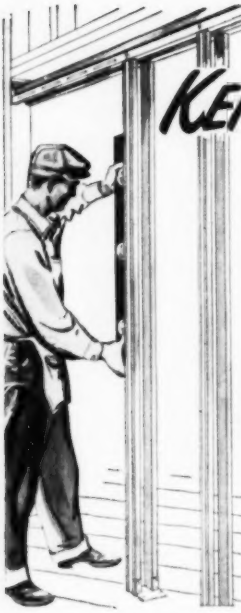

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leads again!

Amazing new Series 800 metal sliding passage door frame gives you advantages never before available!

saves time
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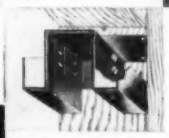
eliminates warp

Builders, architects and owners from coast to coast are demanding the Kennatrack Series 800 Metal Frame for sliding passage doors. This frame saves time . . . saves labor . . . eliminates warpage, and can easily be installed by anyone. Treated for rust resistance. Multiple adjustment features make fit and plumb child's play. Designed for all standard 2 x 4 walls. Frames come in standard door widths. Secure complete facts . . . then you can see more clearly just what these advantages mean.

Prefabricated and complete in one package. Includes famous Kennatrack Series 400 heavy duty track assembled to header at factory, with hangers in place. Can be installed on the job in 25 minutes.

Door rolls smoothly, quietly on not two . . . not four . . . but on EIGHT Nylon wheels. Ball bearing axles.

Above: Wood filler strips in metal frame allow plaster base, stops and trim to be nailed or screwed in usual manner.



Left: Header adjustable two ways: (1) Pocket end allows ¾" horizontal adjustment to fit rough opening; (2) Jamb end permits ⅜" vertical adjustment.

Left: Split jambs and supports also provide 1" adjustment for height.

JAY G. McKENNA, INC.
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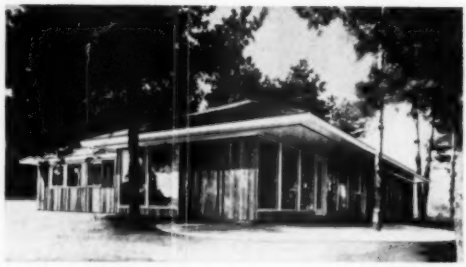
Jay G. McKenna (Canada) Ltd., 104 Jarvis St., Toronto
SPECIALIZING EXCLUSIVELY IN THE MANUFACTURE OF SLIDING DOOR HARDWARE

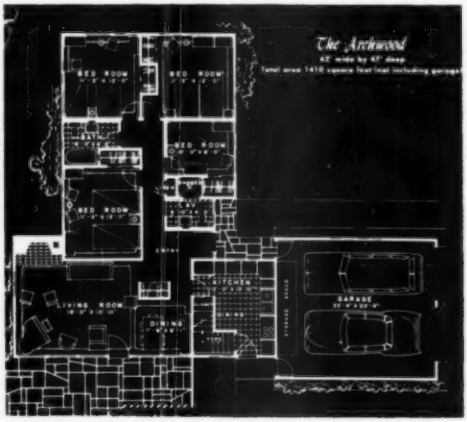


ARCHWOOD is the largest house in the new Peaseway "Contemporary Design" series. It contains four bedrooms, two baths, large storage space, and fully-equipped kitchen. It has 1410 square feet of floor area not including garage

"Contemporary Design" Series New to Peaseway Line

Recently introduced by the Pease Woodworking Company of Cincinnati, Ohio are the new "Contemporary Design" series of two, three and four bedroom prefabricated houses. Two of the larger units were erected in Hamilton, Ohio to test public opinion. The company officials believe that the great interest shown in these houses will assure nation-wide acceptance. The model houses are priced from $19,500 up.

Low and rambling, the houses have wide overhanging eaves that contain a continuous screened ventilating strip on the under side. Air is expelled from the house by an attic exhaust fan through this ventilating strip. The living



SLEEPING AREA of the Archwood is well set apart from the rest of the house for maximum privacy

quarters are on one floor. Horizontal sliding windows placed high under the eaves help assure privacy.

Both houses feature kitchens equipped with automatic dishwasher, waste disposer, steel cabinets, and ventilating fan. Closets have ceiling-high sliding louvered doors which afford easier access to the closet interior and provide ventilation.

The interior walls are of plywood and are papered. These walls are made seamless by a special Peaseway process. Hardwood floors complete the interior.

The Archwood contains four bedrooms, 2 baths, and

(*Continued on page 246*)

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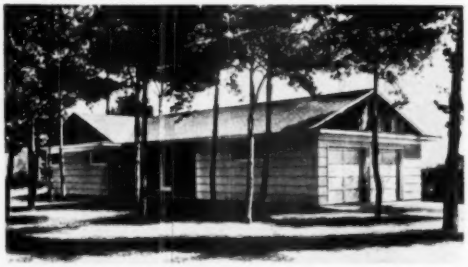
Contemporary Design . . .

(Continued from page 244)

a 2-car garage. All windows are glazed with insulated glass. A concrete terrace adjoins the house and has a convenient entrance from the living-dining room area. It was designed by Oscar Sonorov, A.I.A., noted for his Carver Courts work, a prize-winning war housing project in Philadelphia, Pa.

The Crestwood, a three bedroom house, has one bath, large insulated glass picture windows, and an attached two-car garage. It was designed by Schwarz and West, South Bend, Indiana, architects. Both are members of the



THE THREE BEDROOM CRESTWOOD has generous-sized rooms, good storage facilities, and fully-equipped kitchen. Shoulder height windows assure privacy. The house has 1130 square feet of floor area not including the two-car garage

GOOD CIRCULATION in the three bedroom Crestwood is the plan's main feature. The kitchen location affords easy access to rest of the house for maximum privacy

A.I.A. and winners of the Indiana A.I.A. exhibit for the best house built in 1950.

The Eastwood is the lower cost two bedroom model designed by Robison Heap, of Alexandria, Virginia. Mr. Heap's work has gained national prominence as it has appeared in many leading national magazines.

The new designs are in full production and are additions to the existing Peaseway line of traditional Cape Cods and ranch style prefabricated houses.

Cleveland Improves Slum Areas

Ohio's urban redevelopment law has enabled the Cleveland Home Builders Association to plan construction starting next spring of whole city blocks of modern, low rent housing units in slum areas. Structures will be razed block by block and replaced by the builder group, known as the Cleveland Private Enterprise Redevelopment Corporation.

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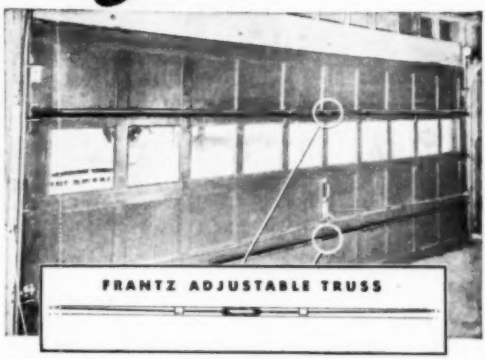

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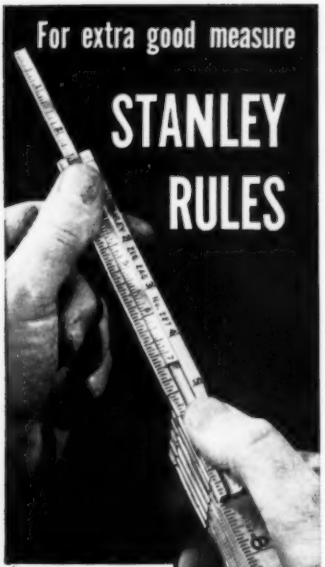

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Taking his blueprints he, and his interior decorator, visited Bianco Manufacturing Company, a St. Louis

manufacturer of seating arrangements. With the help of the Bianco staff they worked out breakfast nook plans for the homes in a ten-house project. Bianco designs included seats upholstered in plastic and an over-all color scheme to harmonize and complement the entire kitchen. Compact layouts utilized the kitchen space to emphasize a spacious feeling.

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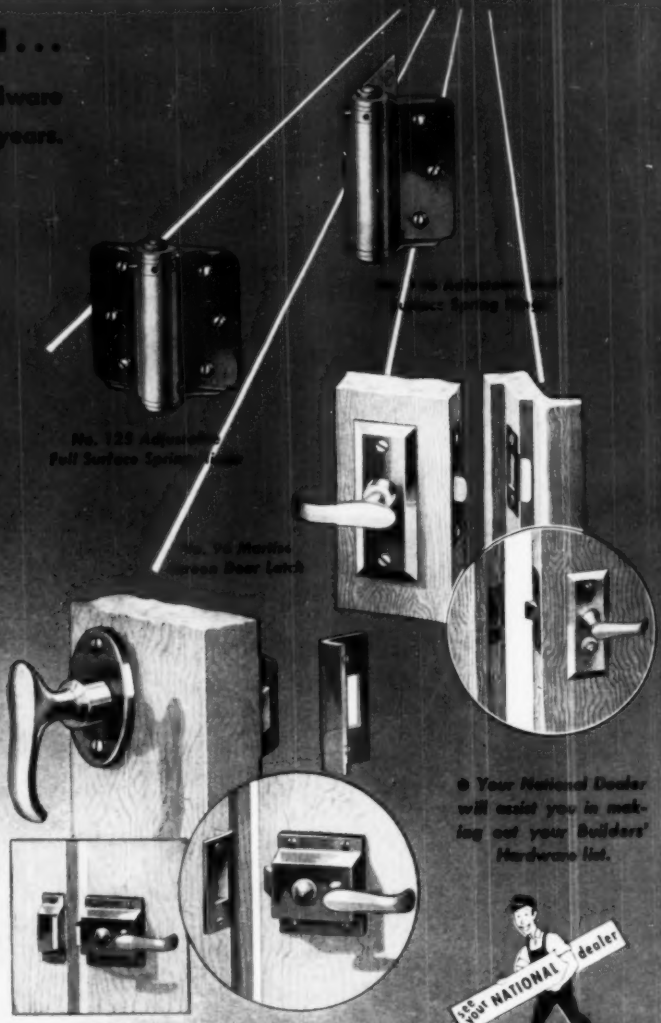

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